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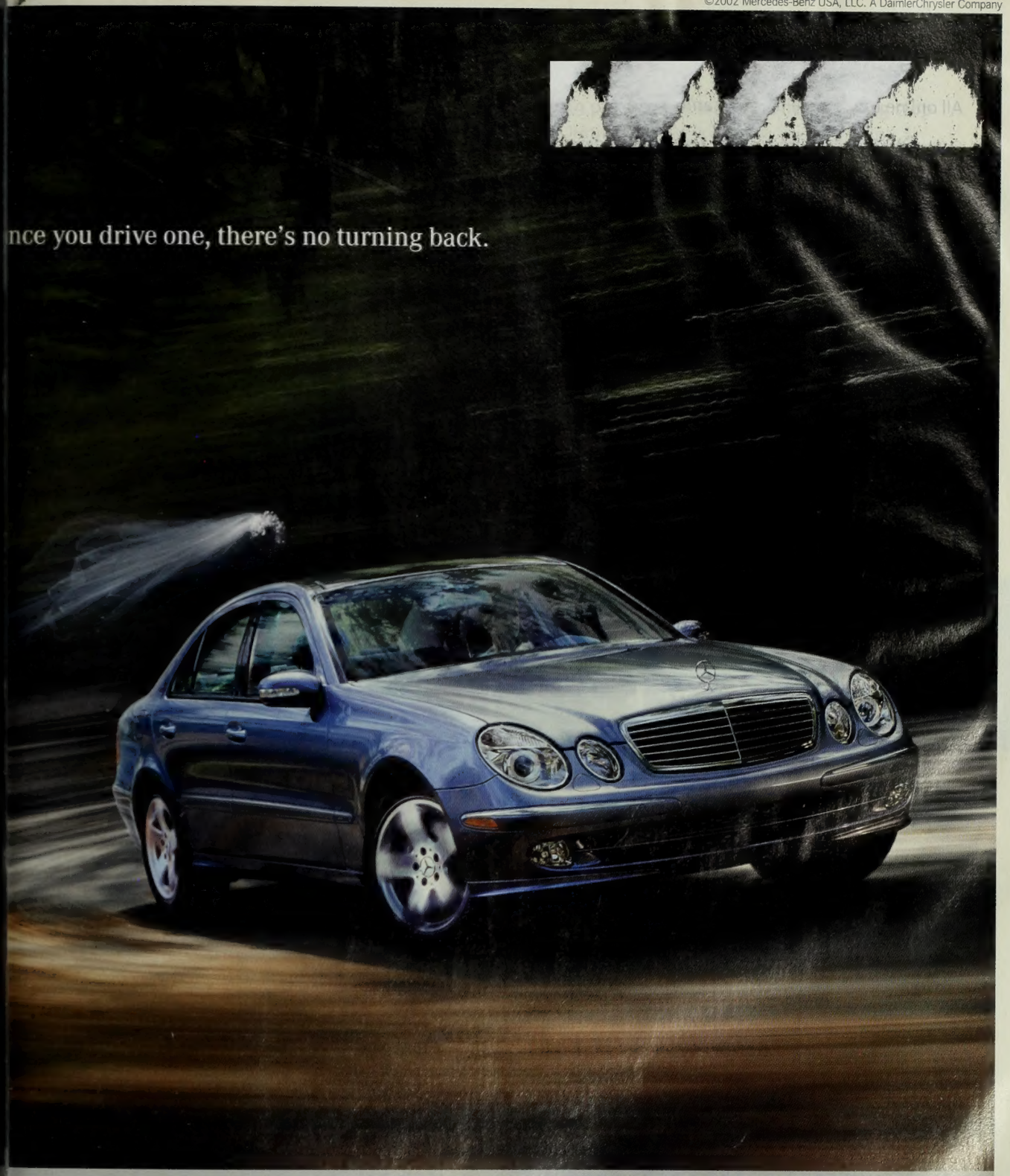


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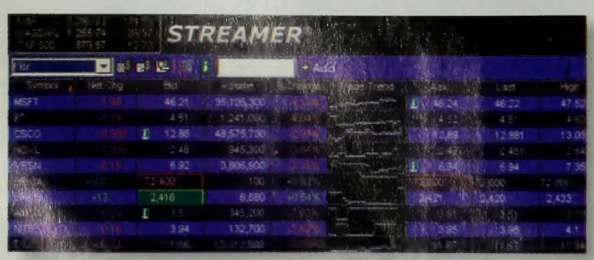

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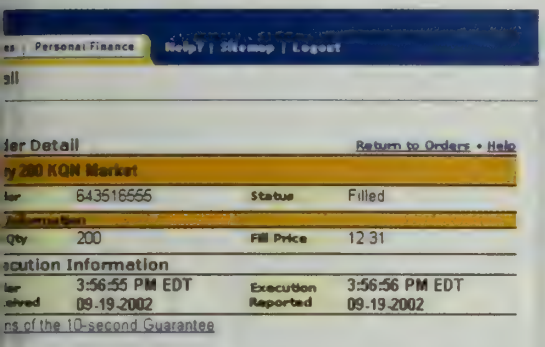


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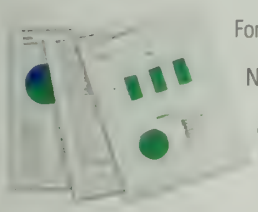

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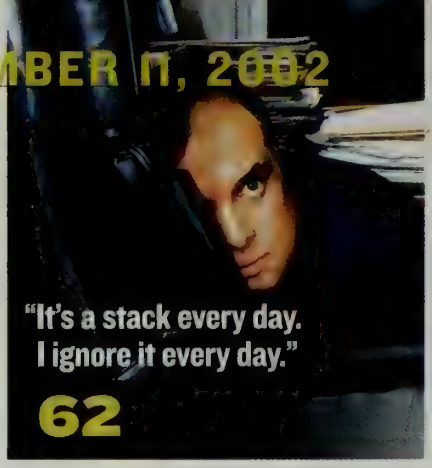



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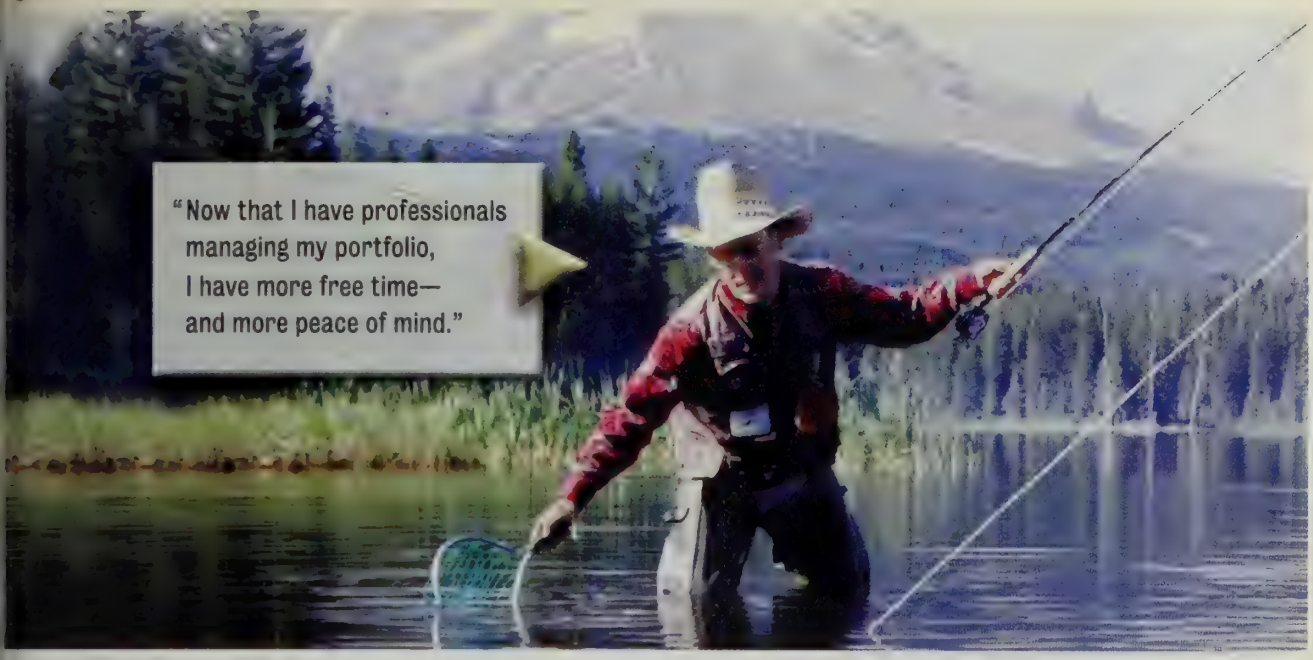


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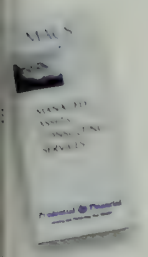

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Matthew Schifrin

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Lifestyle

## The Worst American Cars Ever

Michael Frank

As columnist Jerry Flint has written, this is a new golden age for American cars. But over the years Detroit has turned out some clunkers. It's still hard to explain why any automotive executive in his right mind would have green-lighted, say, the AMC Gremlin. Come with Forbes.com for a bad trip down memory lane, then cast your vote for the worst vehicle ever.

**American Motors' aptly named Gremlin.**

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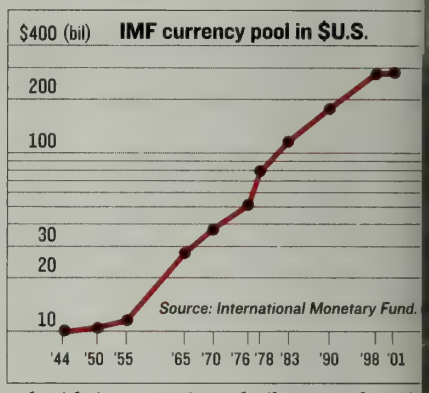
## SIDE LINES

# Liquidate the IMF

Much angst has arisen ov the $480 billion trade deficit that the U.S. is running up. As Ste Hanke explains on page 180, the experts are urging that som thing be done. C. Fred Bergsten, a think-tanker and preemine advocate of do-something economics, wants the government force down the dollar on the currency exchanges. Supposed this would make the world a better place by boosting expor from the U.S. and shrinking imports.

A better idea for the government: Ignore the deficit. Dor meddle in foreign exchange rates. Better still: Abolish the glob agency that meddles in foreign exchange, the Internation Monetary Fund. (See also Fact & Comment, p. 28.)




The do-something philosophy of international economics, which has held sway for 58 years, says that free markets are too scary for international trade and must be countered with interventions, bailouts and capit controls. All that intervention hasn't spared the world period financial crises: Brazil now, Asia in 1997, Mexico in 1995 ar others too numerous to mention. Such crises occur when tl IOUs or banknotes of a nation lose credibility and other natio are called on to make these pieces of paper good. Or, to put another way: Tax the middle class of the donor nations ar hand the proceeds to various speculators. The price tag f Brazil will be $30 billion, to start.

But why validate Brazil's bad financial policies? Instead rescuing the real, we could rescue the citizens upon whom th bad currency is inflicted. Hand out a hundred-dollar bill to ea Brazilian, and let them use this alternative for transactions th are too important for the homemade currency. The global vi lage is already getting dollarized—this is the way Russians p for used cars, instance, or the way Ecuadorians pay for ever day things—and we might as well encourage the practice. time, the circulating dollars or yen or euros handed out in fina cial rescues would create some healthy competition for oth currencies. You could have a reverse Gresham's Law at work, which good money drives out bad. What sane Russian wou take rubles for a nice car when he could take a more credib store of value?

That $480 billion deficit is not going away anytime soo representing as it does a strong preference of foreign savers f dollar-based financial assets (and American hard assets, like re estate). We might as well make the most of the situation.

William Baldwin
EDITOR

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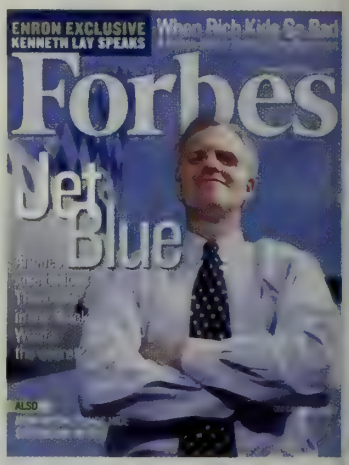
## Trash Talk




"Lord of the Skies" *(Oct. 14, p. 130)* about David Neeleman's JetBlue loses all credibility when it takes a stab at union airline pilots. The writer references the fact that JetBlue pilots assist their flight attendants in picking up trash. Great! Being the professional journalist that she is, when was the last time the writer emptied her own trash can or vacuumed the carpet around her workstation? Maybe you should take a closer look at airline managers who do not negotiate in good faith and try to undermine labor contracts.

PHIL MORGAN
*Atlanta, Ga.*

As a recent passenger on JetBlue from San Francisco to New York, I can only say it's nice to finally fly an airline that understands that all passengers are equally valuable and should have the same comforts. It felt like everyone was flying first class. Neeleman has the right idea.

KARLA KELLER
*San Francisco, Calif.*

## Apology Not Accepted

I hardly expected FORBES to publish an apologia for Ken Lay, a man who inflicted massive damage upon his employees and shareholders. And yet, that's precisely what "The Other Enron Story" *(Oct. 14, p. 62)* is—an attempt to rehabilitate the image of someone who ruined the lives of thousands. Any contribution Ken Lay made in the area of energy deregulation will for all time be overshadowed by what he and Enron have come to stand for: fraud.

ROBERT E. RUBIN
*Denver, Colo.*

## Political Contributions

The critique of the fundraising techniques of corporate political action committees (PACs) expressed in "Mickey Mouse Fundraising" *(Oct. 14, p. 47)* demonstrates a shallow understanding of the issues involved in campaign finance reform and a creative use of facts. The reason PACs emerge under the new campaign finance laws as the preferred source of future campaign funding is because they are the most clearly defined, easily regulated ar transparent process through whic individuals can raise money and co tribute to political campaigns. PACs a virtually untouched by the new can paign finance laws because the curre regulations work.

GREGORY S. CASE
*President, Business Indust*
*Political Action Committ*
*Washington, D.*

## Energy Costs

"Wind Rush" *(Oct. 14, p. 150)* emph sizes present subsidies for wind ener production. I would like to remind yo that every form of energy we use in th United States is heavily subsidized, e ther directly by paying for costs fro the general treasury or by externalizi costs that are then borne by the publ at large in health problems and env ronmental pollution. If we paid the tr costs of the increasingly archaic 19th and 20th-century energy technologie from petroleum and petroleum pro ucts to natural gas to coal to nucle power, no subsidy would be needed

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LINDA S. TAYLOR
*St. Paul, Minn.*

## Trick Question

"Final Exam" *(Oct. 28, p. 64)* presents an interesting and humorous list of test questions, but leaves no place for the moralist. When options a, b and c are all wrong you need to have an option for none of the above. For example: You're borrowing money from your company, interest free. Isn't this embezzlement?

KATHY VINCENT
*Nashua, N.H.*

## Lab Rat

I am very disappointed to see Charles River Laboratories International figured so prominently in the "The Rat Pack" *(Oct. 28, p. 228)*. While I understand that you cater to the business community, the sensibilities of compassionate people are worthy of more consideration. The positive way in which you depict Chief Executive James Foster in the laboratory experimenting on captive creatures is nothing short of disturbing.

JOHN W. KIMBRELL
*Inman, S.C.*

Even if the burden of finding cancer cures and miracle pharmaceutical drugs must be borne by mice, rats and other nonhuman animals, the burden of maintaining compassion for all creatures remains with us. Give your next entrepreneur of the year award to the pe who figures out how to minimize fering, not expand it along with t bottom line.

PATRICIA ANDERS
*New York, N*

## Ignorance Is Bliss

I write in response to "The Priv Hoax" *(Oct. 14, p. 42)*. If Eric Goldr and the Internet merchandising w are so confident that we don't care ab Internet privacy, why do Web brow ship with a default setting of accep cookies? Even today most consum have no idea that habit-tracking files placed on their computers when they the Internet. Most people I speak about this subject are incensed when t learn about them and want to do ev thing they can to minimize the intrusi while still being able to use secure site isn't that consumers don't care; it's they don't know.

THOMAS BLUM
*Mason, C*

## Healing Methods

"Kumbayah Medicine" *(Oct. p. 44)* draws conclusions about alter tive medicines that don't jibe with facts: Many alternative therapies, incl ing homeopathy and prayer interventi have shown unmistakable efficacy. U fortunately, many scientific-minded dividuals who simply won't believe t these sorts of things are possible can be convinced even in the face of g evidence.

DAVID J. SHU
*Augusta,*

## Open for Business

"Dreaming & Scheming Hawaiian St *(Oct. 28, p. 172)* incorrectly descril Covad Communications as a defu competitive local-exchange carrier. Santa Clara, Calif. company emer from bankruptcy protection last Dec ber and is still operating.

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y **Steve Forbes,** EDITOR-IN-CHIEF

*Vith all thy getting get understanding"*

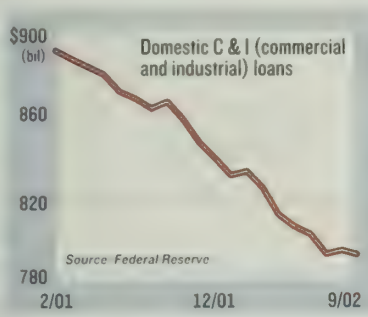
# Mr. Magoo's Credit Crunch

HEN WILL THE WHITE HOUSE AND THE FEDERAL RESERVE STOP e bank credit crunch that is hurting an already anemic economy?

Look at the chart. Banks are liquidating loans with a venance and putting their cash into government securities. This edit deflation has to be reversed or we'll have a recovery that'll quire a microscope to detect.

Banks lent heavily to utilities, high-tech and telecommunicaons companies during the 1990s. As those sectors crashed and as anufacturing went into serious recession over two years ago, the mptroller of the currency and his army of examiners told banks slam on the brakes. Alas for the economy, there were no air bags.

The sudden slowown in lending has sproportionately imcted businesses depennt on banks for workg capital. Loans based receivables and invenries can be quickly liquited, which is exactly hat is happening. No onder so much of the onomy seems to be gasping for air. Take out military and governent spending, and the pulse of the economy is barely discernible.



Even large companies, which can access the commercial per and bond markets, are affected. Banks have been curtailg backup lines of credit for commercial paper. The CEO of a idsize investment-grade utility recently recounted to me w in times past such backups for his commercial paper were adily, rapidly oversubscribed. This year just the opposite happened: He and his colleagues had to go through all sorts of ntortions to negotiate what had once been routine. Outstandg nonfinancial commercial paper has plunged in two years m $350 billion to $150 billion.

For businesses that don't have credit alternatives, the last ar or so has been a nightmare.

Fed Chairman Alan Greenspan *(pictured)* should move deciely to end this deflation. In fact, he should have done it 18 onths ago, but better late than never. He should pick up the phone Comptroller of the Currency John Hawke Jr., a Clinton holdover, d "request" he put an end to his examiners' inquisitions. We're t talking about a Japanese-style eyewink at genuinely bad loans t an easing up on loans that are still being serviced by customers. o often such loans end up in jeopardy as banks strive to get cash demanding immediate repayment or by reducing lines of credit.

To reinforce this move Greenspan should make clear to the public that the Fed will pump in the necessary liquidity to get the gold price back to $350 an ounce—where it was before the Fed began dehydrating the economy—and that it will not deflate when the economy shows genuine signs of life.

We're all familiar with inflation and its adverse effects, but we're utterly ignorant of its sister disease, deflation. The Fed did not supply enough liquidity to the economy in the late 1990s, which is why commodities, the most sensitive barometer of monetary disturbances, crashed. Borrowers didn't realize they were in an environment in which they would, in effect, be paying back more than they had actually borrowed. The U.S.' and most of the world's economies have been suffering from a mild version of what Japan has been going through for more than a decade.

That's why we hear more and more stories about companies lacking "pricing power"; why auto manufacturers offer increasingly attractive packages to move their vehicles; and why retailers are continually finding ways to mark down their merchandise. It's also why companies have been relentlessly reducing costs. Revenues for some have been moving down even faster. Compounding deflation's devastating impact is the fact that many large companies took on too much debt during the boom.

Sadly, the European Central Bank has been aping the Fed's tightness, and, like the Fed, has been doing so in ignorance of the deflationary impact.

When will we get a genuine easing? As economist and occasional FORBES columnist John Rutledge puts it, "Each time the world's central banks have allowed liquidity to deteriorate this much, they have been forced to relent in order to rescue a major financial institution from impending insolvency. We can't be far from that point now." He's right. In 1982 the Federal Reserve's horrific credit squeeze abruptly ended during that summer, when Mexico made it clear that it was about to default on its loans, an event that would have jeopardized the solvency of many major U.S. banks. The Fed did a 180-degree turn, from tightening to easing, and the financial markets took off like a rocket. In early 1983, thanks to the easing and to Ronald Reagan's massive tax cuts, the economy dramatically sprang out of recession.

Except for a brief detour during the 1990-91 recession, neither the stock market nor the economy looked back until 2000.

# Very Nice, But ...

COMPANIES' STRINGENT COST-CUTTING, DRIVEN BY DEFLATION, is what's making the earnings picture pleasantly surprising. Operating profits of the S&P 500 have grown by double digits since late 2001, which is why the equity markets will surge 50% when the Iraq crisis is over—if not before.

But such stocks represent big companies. Most employme in the U.S. is provided by our hundreds of thousands of sm businesses—the very entities hurt by the bank credit crunch.

# Getting America Moving Again

PRESIDENT BUSH IS RIGHTLY FOCUSING ALL HIS ENERGIES ON Iraq. But isn't there another adult in this Administration who can give the economy the attention it needs?

The White House and congressional Republicans should take their cues from what happened in the early 1980s. On the monetary front we need real easing, *not* the phony version we've had so far that is a pale imitation of what Japan's done: cutting rates but not supplying enough dependable fuel to get the economy humming. If Alan Greenspan won't do this, replace him with somebody like Bear Stearns economist David Malpass, who understands the true nature of what's been happening since the late 1990s.

The President should also unveil a tax cut package of Kennedy and Reagan proportions: Expand the already passed, across-the-board cuts in income tax rates and make them effective immediately; slash the capital gains levy; end the double taxation of dividends; increase the deduction for stock market losses that bel guered individual investors can take on their income tax retur raise caps on IRA, 401(k) and Keogh contributions, and perr owners of these plans to make withdrawals at any age they w instead of forcing them to do so at age 70½; liberalize depreciati schedules; and knock down corporate income taxes.

In fact, the Administration should really go for the mojo a call for a flat tax.

The White House should also light a fuse under the Fede Communications Commission to start genuine deregulation the battered telecom industry. And the Administration mu overhaul—if not abolish—the most destructive economic age in the world: the International Monetary Fund. The IMF's let brew of high taxes and debased currency continues to devast developing nations. Brazil will soon be its next victim.

# An Economic Tsunami

JAPAN COULD QUICKLY CASCADE INTO AN ECONOMIC CONTRACtion the like of which has not been seen since the 1930s, if its new economics czar, Heizo Takenaka, has his way. Freshly anointed by hapless Prime Minister Junichiro Koizumi to do whatever is necessary to fix Japan's financial system, Takenaka vows he will force banks to aggressively recognize and liquidate their bad loans, particularly those to some 30 "zombie" companies. The Bank of Japan is vigorously supporting Takenaka's contemplated moves.

*New Official Tells Japan's Banks to Prepare for Pain*

—*New York Times*

What the minister wants to do is fine, in theory. But unless the BOJ aggressively reflates and clearly states that the 12-year-old deflation is over, Japan's economy could descend in a deadly spiral. Rapid liquidation of large loans will further depress the economy, if it's not accompanied by an easing of moneta policy that makes plentiful cash available to solvent (and ne solvent) borrowers. Enacting major income tax rate cuts to stir ulate investing and spending is also an immediate necessi Otherwise, major corpora and financial failures will p much of the still healthy eco omy down, as the vortex c ated by a *Titanic*-size shi sinking pulls down everythi in its vicinity.

No wonder the Nikkei has plunged to a 19-year low and n hovers around a level lower than 25% of its 1989 high. But sto would be in even worse shape if markets weren't assuming the g ernment will back away from Takenaka's drastic course of action just as it has backed away from other big changes in the past.

## RESTAURANTS: GO, CONSIDER, STOP

*Edible enlightenment from our eatery expert Tom Jones and colleagues Patrick Cooke and Monie Begley, as well as brothers Bob, Kip and Tim.*

● **Opia**—Habitat Hotel, 130 East 57th St. (Tel.: 688-3939). A current hot spot of the young and good-looking, with a semitropical ambience. As for the food, stick with the appetizers. Especially good are the Vietnamese nem spring rolls and the tiger shrimp.

● **Il Gattopardo**—33 West 54th St. (Tel.: 246-0412). For those who enjoy the robust fare of Naples and Sicily but prefer it with a contemporary twist, in a sleek and minimalist setting. The food here is wonderful: an artichoke Parmesan appetizer that's exquisite, meat loaf served with mashed potatoes and spinach that defies comparison, and perfect pastas. In warm weather the charming garden in the back is delightful.

● **Lenox Room**—1278 Third Ave., between 73rd and 74th streets (Tel.: 772-0404). Very popular, somewhat formal establishment combining impeccable service and excellent cuisine. Noteworthy: quail appetizer, crab cakes, lobster risotto and a delicious roast chicken. Desserts are scrumptious. F

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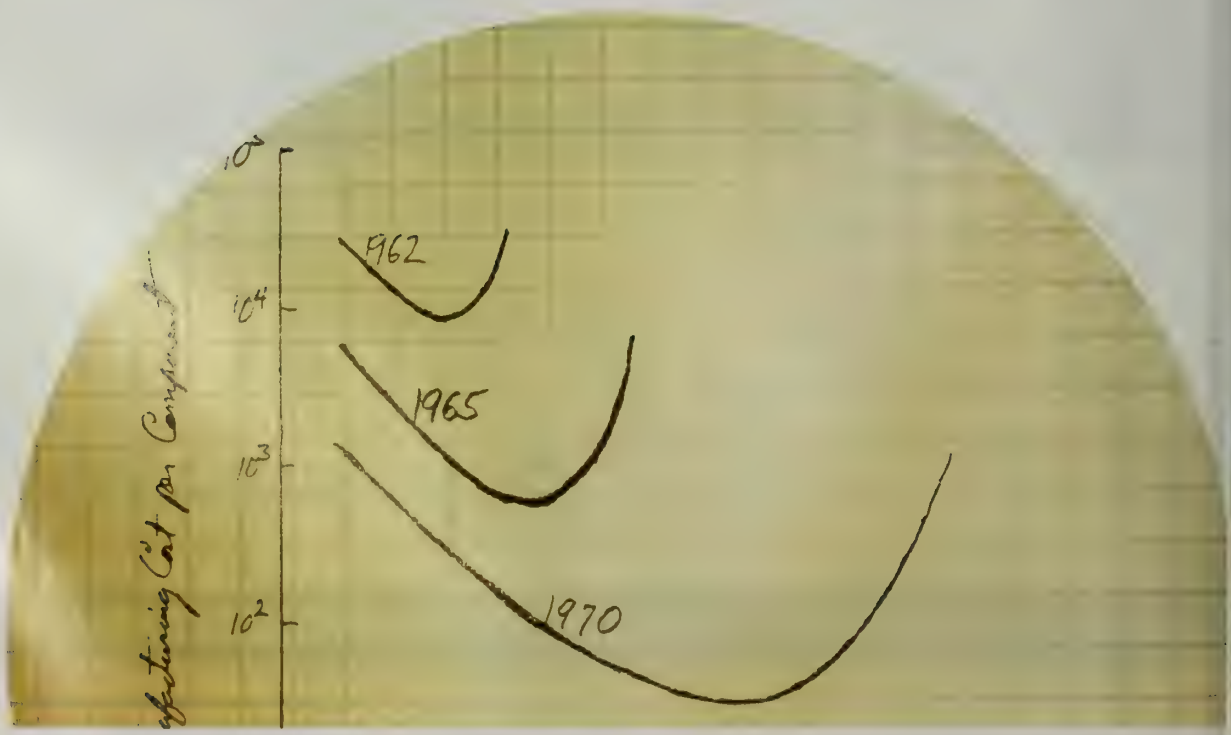

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—GROVER CLEVELAND

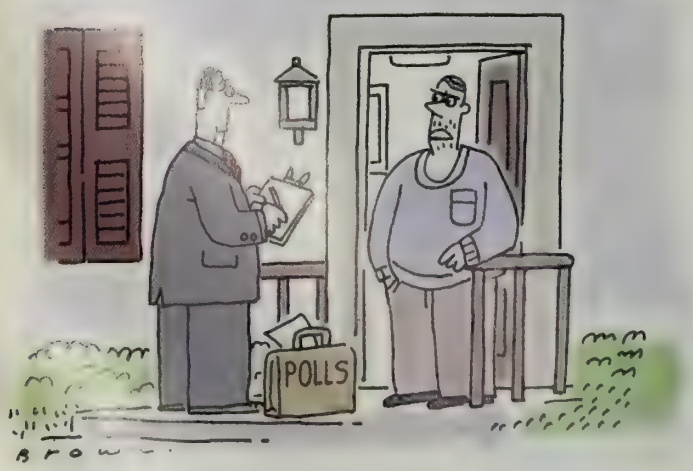
**Clear and Present Danger** Saddam Hussein has made no real effort at resolving international demands—flouting 16 U.N. resolutions since 1990—and is a leader so evil he has even gassed his own people. He also is a leader with a store of weapons that by its size and nature goes beyond the prudent needs of defense. It is in fact immaterial whether you believe Saddam was complicit in the attacks on the U.S. *last year*. Saddam deserves enough to be removed because he represents a *present* threat to people outside his country. The world is too large to prosecute foreign policy on the basis of morality alone. But Saddam is a threat to international security—the primary test of pragmatic policy. That he wasn't removed 11 years ago is a shame; still, it's better that Iraqi regime change should be on the agenda now rather than later.

—*Far Eastern Economic Review*

**Fed Up** The weakness of the stock market and the economy continue to reflect uncertainty about how the Federal Reserve will stop deflation without starting inflation and restraining growth.

Changes in the value of money are the primary cause of inflation and deflation. In the late 1990s, money grew fast but inflation fell fast. The only explanation is that the growth in the money supply was not fast enough to keep up with the growth in the demand for ever-strengthening dollars. In other words, despite fast money-supply growth, monetary policy was tight because the dollar appreciated. As the dollar strengthened, it put downward pressure on prices, causing deflation. To create the monetary policy bridge to normal interest rates, the Fed should be in "neutral" all the time, neither accommodative nor restrictive. This means a commitment to dollar stability in both the short- and long-term. With a neutral monetary policy, the Fed's focus should be on low inflation, not economic growth, asset prices or fiscal deficits. To avoid inflation and deflation, the Fed should use the value of the dollar as a princip guidepost for monetary policy. Given a globalized economy wi relatively free capital flows, it is hard to conceive of a harmful infl tion or deflation if the dollar's value is stable. And conversely, wi changes in the value of the dollar, as we saw in the 1970s and aga in the late 1990s, seem guaranteed to lead to inflation or deflatior

—DAVID MALPASS, chief global economi Bear Stearns, *Wall Street Journ*




*"How do I feel about voter apathy? Well, I couldn't care less."*

**Heed the Call** Let us contemplate our forefathers, ar posterity, and resolve to maintain the rights bequeathed to us b the former, for the sake of the latter.

—SAMUEL ADAM

**Road to Recovery** The annual ritual of crisis and den in Japan that has prolonged its economic stagnation is wearin thin. The fact that it is supported by a persistent and steadily acce erating deflation that is hollowing out the balance sheets of Japar financial intermediaries has turned this ritual from an expedie way of avoiding confrontation of crisis to a dangerous process th threatens the financial integrity of the world's second-large economy. Ultimately, geopolitical stability in Asia depends on sustainable economic recovery in Japan. That, in turn, requir that the country's financial intermediaries shed their bad loar shrink their number, and return to the normal business of med ating between borrowers and lenders in a manner that provid the necessary precondition for sustainable economic growth.

—JOHN H. MAKIN, American Enterprise Institu

**History's Narrative** The hardest thing to convey writing history or teaching history is that nothing ever had happen the way it happened.

—DAVID MCCULLOUGH, interviewed by Roger Muc in *AmericanHeritage Great Minds of Histo*

**Bye, George!** Powdered wig. Wooden teeth. Stern fac That old-fashioned picture of George Washington may soon be hi tory. The [Mount Vernon Ladies' Association], which runs the fir president's Virginia museum-estate, is giving him an $85 millic facelift because focus groups have judged him to be dull and edu cators have lost interest in him in the past 40 years. Younger imag of Washington, sans wooden teeth and wig, are being created b a plastic surgeon, forensic scientists and other experts. The imag will be used to create movies of him as a twentysomething hur and new statues, which will adorn Mount Vernon's vast grounc

If Washington's makeover catches on, who knows where could end? Americans may one day exchange dollar bills ar quarters bearing the likeness of a smiling sex symbol.

—*USA Today*

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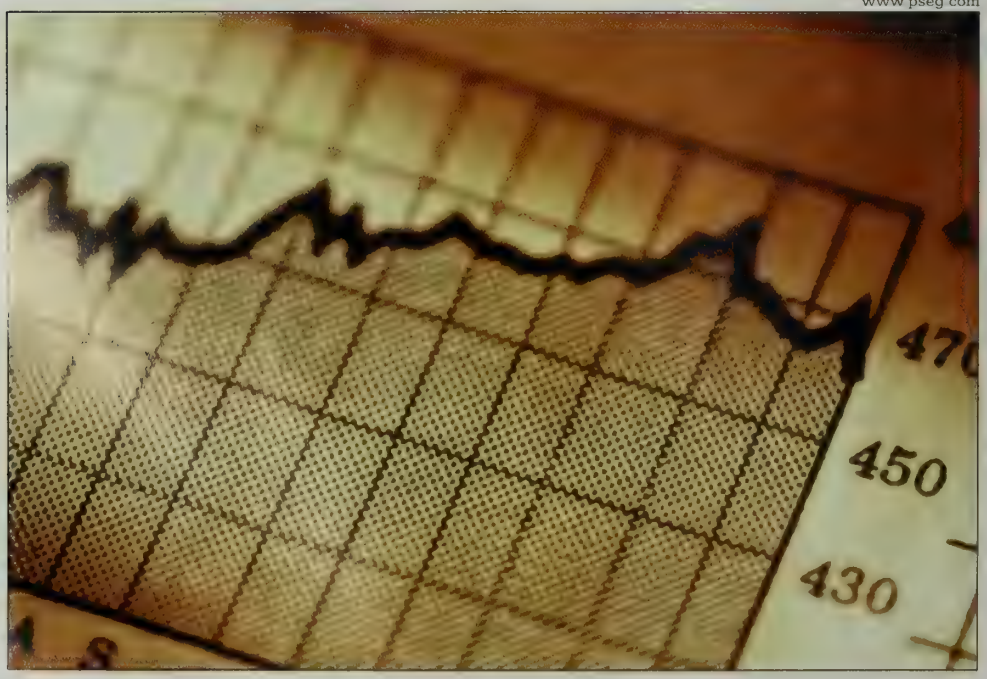

Caspar W. Weinberger, CHAIRMAN

# Italy and Hong Kong—and Saddam Hussein

VO RECENT QUICK TRIPS—WEST AND EAST—REVEALED SOME rprising differences in how our allies and friends view the pos- ɔility, indeed the probability, of war against Iraq, and in how they ew economic issues. These two topics wholly engage our media ıd seem to be entwined with our feelings about the future.

But before reporting on these trips, I must mention two argu- ents about Iraq currently making the rounds in Washington. rst, as evidence of the Administration's confusion over its objec- ves in Iraq, the antiwar faction brings up the fact that some of esident Bush's supporters talk about tisarming" Saddam Hussein, while oth- s talk about "changing regimes" or, ɔre forthrightly, "deposing" Saddam.

This is an absurd discussion. We can- ɔt "disarm" Iraq and leave Saddam in ace. Disarming has to mean getting rid of ɔth Iraq's weapons and its brutal leader, ɔose trademark is lies. If Saddam is left in ace and U.N. weapons inspectors go in d report that Iraq now has no weapons mass destruction (because they really ɔn't have enough information to know all the places they need to spect), Iraq will rearm as quickly as it did following the Gulf war years ago. Replacing Saddam is the only way to attain peace.

CWW and Hong Kong's "CEO" Tung Chee-hwa at the Forbes Global CEO Forum.

The second argument is made by those who want to do ɔthing until Saddam explodes a nuclear weapon. They allege at a "post-Saddam" regime would be difficult to establish. ay, no more so than the splendid ones we secured to replace all ose dictators who started World War II.

Nit-picking is always futile, but rarely so dangerous. The choice simple: to have a Saddam equipped with nuclear weapons sooner an we think, or to have a world free of him. Those who seek some ıird way" merely hasten the day that a new—and by far the ɔrst—nuclear power takes the stage. President Bush, in his Oct. 7 eech in Cincinnati, stated the case with force and inspiration. It ıs unfortunate the "major" television networks didn't carry that eech; it seemed they chose a good way to "minorize" themselves.

But back to our trips.

## aly

was a pleasure to experience and tour in September the his- ric places encompassed in this beautiful country. We visited ıly's principal cities and found the economy to be basically ong. There are worries over whether Italy can adhere to the ropean Union's strict rules regarding deficits. The government s submitted a budget that maintains its tax-cut pledges and ludes expenditure cuts to control the deficit. The problem with EU rules is that they require countries that need to encourage consumer demand now to follow precisely the wrong path.

Many businesspeople, particularly the owners and operators of small businesses, seem to miss the lira and continue to quote prices in the former currency. While owing to its EU commitments Italy faces strong economic pressure to reduce its deficit, few want to take on the strong economic reforms that are needed to do that. Not many seem worried that the EU will impose any severe sanctions, as too many other member countries are in the same boat. The EU itself has even suggested the balanced budget requirement be delayed until 2006.

Regarding Iraq, Italy is a warm friend and admirer of the U.S. There is little visible anti-Americanism, and Prime Minister Silvio Berlusconi strongly supports our war against terrorism. Few of the people we spoke with exhibited much worry over or any deep interest in the prospect of war in Iraq. This may be because few Italians feel any sense of threat and because the U.S. military presence has become accepted and welcome since World War II.

## Hong Kong

The FORBES GLOBAL CEO Forum in Hong Kong later in the month provided some interesting comparisons. When we inquired how Asians felt about a military operation in Iraq, reactions varied from bored to amused. "We are far too busy making money—or trying to—to worry about that" was the usual response.

Hong Kong is emerging from some difficult economic setbacks, and there are two issues of far more interest to its people. Residential real estate prices have dropped 60% since 1997, hitting a ten-year low while we were there. While prospects for the housing market are negative, one must remember that prices started at a very high level. Luxury flats are still selling at or near historic highs. The second concern is the adoption of new secur regulations that were put in place, ostensibly, to increase the government's ability to deal with terrorist threats and to decrease the likelihood of Hong Kong's being used as a terrorist base. These regulations may encroach on the rights of free speech, and many are worried that terrorism is an excuse for China to do just that.

Hong Kong is a busy, bustling city. It has many huge construction projects under way and is clearly able to attract large capital investments. China has shown a few signs of asserting its sovereignty. Clearly, the fewer such assertions the better, if Hong Kong is to have a prosperous and happy future. F

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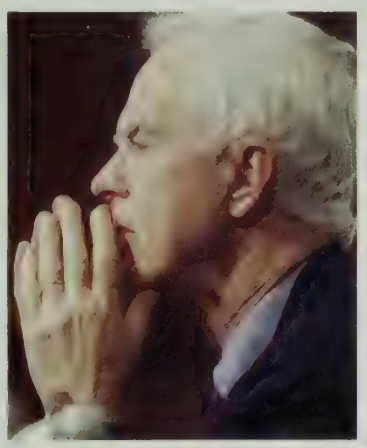
By Rich Karlgaard, PUBLISHER

# Buy the Numbers

DON'T YOU LOVE NUMBERS? THEY NEVER FAIL TO TELL A GOOD story—often the story you weren't expecting.

**The last 20 years.** This period marks the erosion and collapse f American business morals. So lectures Arthur Levitt, the former head of the Securities & Exchange Commission. Is Levitt ight? Then let's have more champagne, baby! Business was wful 20 years ago. It was a time of sharp recession, with the Dow still under 1000, struggling to touch a peak first hit n ... gasp, 1966. This meant the inflation-wracked Dow of 1982 as really more like 400. The IT revolution, stock market boom, roductivity boom, rebirth of optimism, enaissance of entrepreneurship—all lay in e future in 1982.

**Reagan's $1.7 trillion deficit.** Levitt would like s to believe that Ronald Reagan's budget eficits—$1.7 trillion added in eight years—et a tone of moral laxity later aped by the kes of Enron's Andrew Fastow. Cheap sound ite, that. Yes, it's true that the 1981 tax cuts, hen combined with defense spending that oubled (from 3% to 6% of GDP) on Reagan's watch, blew up the deficit. Reagan efenders blame this on the Democrats, who ontrolled the House, the initiator of budgets. say, why share the credit! What Reagan did as magnificent: His tax cuts led to a doubling of American asset values—America's alance sheet, if you like—from $17 trillion to $34 trillion by 989. Increased defense spending led directly to the Soviet nion's folding its cards. That $1.7 trillion was the smartest federal loan taken out since Thomas Jefferson's Louisiana Purchase.



SMACKS OF ART: Former SEC Chairman Levitt says business ethics have turned stinky over two decades.

**7.5% annually.** China's economic growth over the last decade. merica last enjoyed that kind of growth in the 1870s and 880s; England in the 1820s and 1830s.

**12% annually.** Shanghai's economic growth in the last decade. hanghai, according to FORBES' managing director in Asia, Vill Adamopoulos, buzzes like the 1980s Wall Street, the early 990s Hong Kong and the late 1990s Silicon Valley, combined.

**$1.1 trillion.** Believe it or not, China's GDP is still only onenth of ours. With 1.3 billion citizens, annual per capita income China is around $900. You can draw a couple of conclusions om this. First, China remains a very poor country outside of s coastal cities. Second, the country's fantastic GDP growth te is likely to continue, because it is based on relatively low umbers to begin with.

**750,000/150,000.** The number of engineers and electrical ngineers, respectively, graduating from China's colleges every year. These numbers trounce those of the U.S. tenfold.

• **$4,300–$8,600.** The annual salary a Chinese engineer can expect to make in the coastal cities.

• **1.2-to-1.0.** The ratio of boys to girls in China since the one-child policy was instituted in the 1970s. If the U.S. is smart about its immigration policy, it will roll out the red carpet for China's sex-starved male engineers. Then we won't have to worry as much about our own deficit of engineers.

• **$500,000/-$250,000.** This cynical but handy formulation comes from Guy Kawasaki, CEO of Garage Technology Ventures. (Disclosure: I'm on the board.) Guy uses it to value high-tech startups in the post-bubble era: Add $500,000 of valuation for every staff engineer; subtract $250,000 for every staff M.B.A.

• **$2 trillion.** Cash parked in U.S. money market funds as of October, according to Goldman Sachs Vice Chairman (International) Bob Hormats. Money market accounts have quadrupled in two years. There is a silver lining in this, as explained below.

• **25% & 50%.** Growth of the Dow and Nasdaq, respectively, over the next six months. Thus predicts Andy Kessler, manager of the hedge fund that was ranked third in the U.S. in 1999 and a sometime FORBES columnist. Kessler offered this prediction when the Dow was 7300 and Nasdaq was 1160, so some of the rebound has occurred. Andy says the key is the Hormats money market figure of $2 trillion. This stockpile of cash wants to seek higher returns in the stock market but is waiting for a sign that the water is safe. The removal of Saddam Hussein will be that sign.

• **2000 points.** This, according to CNBC's Larry Kudlow, is how much the Dow will go up on the day American troops set foot in Baghdad. Too rich for me, although I share Kudlow's general optimism.

• **8.6 seconds.** The time it took Bob Hayes, who died this fall at the too-young age of 59, to cover 100 meters during his anchor leg of the 400-meter relay in the 1964 Tokyo Olympics. Bullet Bob was handed the baton with his team running in fifth place and blew past sprinters from Cuba, Jamaica, France and Poland to the largest margin of victory ever achieved in that race. Hayes strutted his stuff before the era of steroids. He was the greatest sprinter who ever lived.

Now, if Arthur Levitt modestly claimed that there'd been an erosion of sprinter talent over the last 40 years, I'd buy that. F

Forbes.com | Visit Rich Karlgaard's home page at www.forbes.com/karlgaard or e-mail him at publisher@forbes.com.

By Betsy McCaughey, ADJUNCT SENIOR FELLOW AT THE HUDSON INSTITUTE; FORMER LIEUTENANT GOVERNOR OF NEW YORK STAT

# Physician, Wash Thyself

## If hospitals revealed how many people get sick in their care, the infection rate would drop

YOU'VE SEEN THE ADVERTISEMENTS IMPLORING YOU TO USE this or that hospital. They boast they have the best doctors or give the best care. But one fact you won't see advertised is how many patients pick up an infection while hospitalized. Hospitals are doing their best to keep their infection rates secret.

It's no wonder. One out of every 20 hospital patients gets an infection. That's 2 million Americans a year. An estimated 90,000 of them die as a result. Some infections are unavoidable. For elderly patients and patients with immune systems weakened by cancer or AIDS, infection is often the last stage in a long illness.

But one-third to three-quarters of infections are preventable, according to varying estimates. The most effective way to cut down infections is for doctors and other staff to wash their hands between treating patients, according to the Centers for Disease Control & Prevention. Research shows that physicians clean their hands between patients only 48% of the time. "Even at the best hospitals," the figure is only 60%, says Dr. Beth Raucher of Beth Israel Medical Center in New York City. Staffing shortages, too few sinks and other excuses are offered for the lack of hand washing. "To be perfectly blunt, one reason doctors don't do it is that we are under so much pressure from HMOs to see as many patients as possible," says Dr. Ernest Atlas, an infectious disease expert in Connecticut.

*"One-third to three-quarters of infections are preventable, according to estimates. Disclosure will pressure hospitals to clean up their act."*

Other entry points for infection are intravenous (IV) and urinary tract catheters, tubes that allow liquids to enter or leave a patient's body. Catheters need to be changed often, used less, and inserted and removed under sterile conditions. Doctors complain that hospitals are putting cost-cutting ahead of infection control by doing away with specially trained IV teams and cutting back on some precautions for sterilization.

Another problem is the liberal use of antibiotics at many hospitals. That increases the infection danger, because germs develop resistance to one antibiotic after another.

What can lower hospital infection rates? For starters, patients can try to protect themselves. Get out of the hospital as quickly possible. Keep a hospital-approved hand cleaner at your bed ar ask staff to use it. Request that only essential personnel be in th operating room (allowing medical students could increase yo risk). Ask surgeons for their infection rates; they know them.

But most important, you should be able to compare infe tion rates for hospitals. The ri of getting an infection at Ne York-area hospitals varies fro 1% to 15%, according to Dav Perlin, scientific director of th Newark, N.J.-based Public Heal Research Institute. Wouldn't yo want to know which hospitals avoid? Disclosure will pressu them to clean up their act. Tha in turn, will save money for ta payers footing Medicare an Medicaid and for employers wh pay for their workers' insuranc A serious bloodstream infectio can add $30,000 to a hospital bi

Twenty states now collect da on adverse events, including infe tions that lead to serious harm death; nearly all accede to the ho pital industry's demand for s crecy. On a federal level the CD collects infection data from a fe hundred hospitals out of the tho sands in the nation, and it pledges to keep the information secre

Why the cover-up? One argument against disclosure is th infection report cards would discourage hospitals from treatir the sickest patients. Fair enough, but rates can be adjusted that hospitals treating AIDS and cancer patients won't be judge against hospitals treating healthier patients.

New York State's experience with another type of disclosu suggests that it works. Once the state began publishing corona bypass surgery death rates hospital by hospital (adjusted f patient mix), deaths declined.

Britain is taking a step in the right direction. In Februar after London's teaching hospital infection rates soared to amo the highest in England, the National Health Service started pu licizing the names of infection-ridden hospitals.

Concealing the information may help save face, but it wo save lives. It's time for infection report cards.

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AUGUST 6, 2001

# A Little Skechy

SHOEMAKER SKECHERS has run into a wall since we wrote admiringly about the $970 million (sales) company. Skechers' strategy is to produce quick knockoffs of expensive brands and anoint them with the elusive teen hip quotient through endorsement deals with the likes of pop queen Britney Spears.

But hipness can't overcome tight budgets. Sales dropped well below expectations in the crucial back-to-school shopping season. The shortfall caused the company's third-quarter results to come in under expectations and slashed the earnings outlook for the fourth quarter to half of Wall Street's original expectation of 26 cents a share. All that has taken its toll on Skechers' stock, which has tumbled 62% since June to $9.

Not all the news is bad, though. The company claims its spring 2003 lines were well received by buyers at trade shows, and the finicky fall fashion revie still dubbed Skechers stylish, thanks part to a new three-year deal with Spea

—*Brendan Cof*

OCTOBER 29, 2001

# Inside Korea

NORTH KOREA NOW ADMITS, AS W reported a year ago, that it does inde have a nuclear bomb. Our indire source, a defecting nuclear physicist th hiding in China, is now in South Kor supplying invaluable information abo the regime's secret nuclear program. H information has been posted on the W in Korean and Japanese, with accompan ing maps, by Osaka, Japan-based Kan University professor Lee Young Hwa. I heads a North Korean dissidents' gro that helped the nuclear physicist defect

Among the defector's revelatio North Korea has a secret institute that using political prisoners as test subjects study chemical and biological weapo North Korea has also recently set up special commando training camp alo the Chinese border. Most disturbing all, the defector says North Korea is co ducting research on "radioactive poll tion and atmospheric science." Th

## Flashbacks

70 YEARS AGO IN FORBES/APRIL 1, 1932

**Oh, Henry** Henry Ford takes too long to turn around. The world learns that he is to bring out a new car—and then months and months pass before his new product reaches the market. Meanwhile the whole industry suffers. Many postpone buying until they can examine the promised Ford model. His declaration that he would supply 1.5 million of his new cars in the first twelve months of production thrilled the country—until reflection convinced the sober-minded that Ford couldn't possibly accomplish any such feat.

30 YEARS AGO IN FORBES/MARCH 15, 1972

**Stop the Economy!** One big union. One big union that could paralyze the nation. That has long been the dream of certain labor leaders, some of them confirmed leftists, some of them merely power-hungry. And now Harry Bridges, the aged (70), embittered long-time president of the International Longshoremen's & Warehousemen's Union, is working on a plan to make that dream con true. A frightening prospect? Bridges' mouth is watering at it. La year and this he kept West Coast ports closed for 134 days. "It's myth that strikes hurt the general public," he says. "Strikes are go for the country because they raise the workers' purchasing power

20 YEARS AGO IN FORBES/DECEMBER 20, 1982

**Roboworker** To regain lost market share, Fiat's manage have had to push major changes through the company. The ev dence of those changes quickly becomes apparent as you wa through Fiat's mammoth Mirafiori works in the suburbs of Turi The factories are almost devoid of people. Many of the 20,00 workers that Fiat has cut from its bloated 315,000-man labor for were at Mirafiori. Gone is the traditional assembly line, with i overhead conveyor moving along at stately speed while worke struggle to affix parts to the body chassis or cars under constru tion. In its place have come robot carriers that move each car-i the-making to work sites by means of a radio guide wire in the fa tory floor.

*Fiat announced in October it would lay off a fifth of its work force.*

ıld mean a dirty bomb with the capac- to spread radioactivity throughout the nosphere and kill millions of people.

*—Benjamin Fulford*

Y 13 2002

## ill Perils

HEN WE LAST CHECKED IN WITH raZeneca, the British drugmaker was broiled in a high-stakes legal battle over ent control of its bestselling Prilosec ırtburn drug. The little purple pill's in patent had expired in October 2001. raZeneca had gone on the offensive, ng generic firms for infringing its ents—not on the medicine, but on the y it was assembled into a pill.

In October AstraZeneca was handed a ıl victory when New York Federal Dis- t Court Judge Barbara Jones ruled that raZeneca's patents were valid and that ee of the four generic firms' versions of drug infringed those patents. The ruling ans that at most one copycat is likely to ch the market in the near term. As- Zeneca shares soared 13% on the deci- ı, while shares of generic maker Andrx rp., one of the losers, were slammed vn 40%. Andrx is planning to appeal. raZeneca's next hurdle comes in 2007, en its remaining Prilosec patents expire.

*—Robert Langreth*

RUARY 7, 2000

## uban Connection

SEEMED LIKE A LONG SHOT WHEN her Daniels Midland attempted to get ehold in the Cuban food market three rs ago. But ADM is already reaping the ards. Eight months after our story ran, sident Clinton signed a bill permitting d sales to Cuba, and in the last year the catur, Ill. company sold Cuba 330,000 tric tons of corn, soy and other com- dities for $50 million. In September M was the primary sponsor of a Havana le show where 270 U.S. food companies Cargill, Sara Lee and Tyson Foods sold tal of $92 million in products.

U.S. law dictates that all payments n Cuba must be in cash, making the mmunist state one of ADM's safest cus- ners, according to Anthony DeLio, its point man on Cuba. At the trade show, Castro himself signed another $15 million contract with ADM. *—Michael Freedman*

SEPTEMBER 2, 2002

## Housebroken

A MONTH AFTER OUR EXPOSÉ ON HOME lender Household International, the company reached a preliminary agreement to pay as much as $484 million to settle abusive-lending charges made by dozens of state attorneys general and regulators. The payment would be the largest ever for a consumer lender. Our piece described how Household was lowballing the costs of its mortgages and even lying to attract borrowers at its branches in more than a dozen states. In our story, Household claimed the practice was not widespread; it still admits no wrongdoing. *—Bernard Condon*

SEPTEMBER 3, 2001

## Fresh Sales

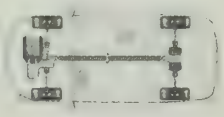
SUBWAY HAD ONLY BEGUN TO BITE INTO the fast-food market when our story ran a year ago. Since then, the 37-year-old privately held company has surpassed McDonald's to become the nation's largest

fast-food chain, with 14,000 outlets. Though Subway's $5 billion in global sales pale next to its rival's $40 billion, Subway's sales are on the rise, up 27% in 2001. Subway is still pushing aggressively into the market, planning to open 2,000 new stores by year-end. Another bold move: a new "Tuscany" decor that includes brick wallpaper, stone floor tiles and chairs upholstered in red, green and wheat-colored faux suede. *—RiShawn Biddle*

Taking the Acura MDX even further.

260-hp VTEC engine *The MDX now has 20 more horsepower and is even certified as an Ultra-Low-Emission Vehicle (ULEV-2).*

Voice-activated navigation system *Finding your way is now easier than ever. (Available on all Touring Package models.)*



Electronic 4-wheel drive *When wheelslip occurs, its Variable Torque Management® (VTM-4™) System helps to maintain traction.*

Rearview camera *Need help backing up? There's an available rearview camera. The image is displayed on the navigation screen.*

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MDX with Touring Package shown. ©2002 Acura Division of American Honda Motor Co., Inc. Acura, MDX, VTEC, Variable Torque Management and VTM-4 are trademarks of Honda Motor Co., Ltd. Make an intelligent decision. Fasten your seat belt.

# OUTFRONT

# The Great Dividend Heis

**Owens Corning, the Chapter 11-mired maker of insulation hawked b the Pink Panther, wants to force shareholders to give back years o payouts. Stock investors will get doubly hosed if this idea spreads.**

**BY CARRIE COOLIDGE**

THAT DIVIDEND CHECK belongs to you, right? Maybe not. Owens Corning, in Chapter 11 bankruptcy protection, is seeking to recoup as much as $42 million it paid out to big shareholders in recent years. If it wins, investors in other troubled companies could lose—yet again.

Best known for its use of the Pink Panther to peddle Fiberglas insulation, Owens Corning is attempting a heist that would confound Inspector Clouseau. Owens Corning, which went Chapter 11 in 2000 amid towering asbestos claims, filed a lawsuit on Oct. 2 against major shareholders, aiming to force them to relinquish dividends paid from 1996 to 2000. The last quarterly dividend it sent out before the Chapter 11 filing paid 7.5 cents a share for a nice 3.7% annual yield.

Should Owens Corning prevail in its suit, filed in federal bankruptcy court in Wilmington, Del., other Chapter 11-enmeshed outfits surely would be tempted to try their own grab-backs (*see table*). "Just how deep can they take this?" worries Abba David Poliakoff, a securities lawyer at the Baltimore firm of Gordon, Feinblatt, Rothman, Hoffberger & Hollander. Shareholders already get the worst of it in corpo bankruptcies; creditors often receive so thing back, but owners of common st typically are wiped out.

Owens Corning's legal theory border a kind of stupidity defense: Duh, didn't even know we were insolvent wher paid the dividends, so now we want 'em b It is based on a recent ruling in another bestos-related Chapter 11 filing: that of W Grace & Co. Creditors want the Delaw court to rule that Grace's 1998 sale of the ovac unit to Sealed Air Corp. should be lified because in July the court ruled G was technically insolvent years before its 2

## Who's Next?

These companies, which paid dividends before th Chapter 11 filings, could follow Owens Corning's le wins in court. None will say what it will do at this p

| Company | Bankruptcy filing | Last paid dividend[1] |
|---|---|---|
| ComScan | July '01 | Feb. '01 |
| Enron | Dec. '01 | Sept. '01 |
| Federal-Mogul | Oct. '01 | Nov. '00 |
| Polaroid | Oct. '01 | Nov. '00 |
| USG Corp. | June '01 | Feb. '01 |
| Warnaco | June '01 | Sept. '00 |

[1]To shareholders of record. [2]Sum of most recent four quarters commen 15 cents per share for three quarters; for one quarter (for shareholders 2001) paid a dividend of one share for every share owned.
Sources: MarketGuide via FactSet Research Systems; Bloomberg.com

ling. Grace's creditors want the Cryovac nit to rejoin Grace so they can draw oney from a bigger asset pool.

Armed with the Grace ruling, Owens orning argues that it, too, was insolvent efore its bankruptcy filing—for four ars, in fact. Hence the 1996-2000 divi-ends were as invalid as the Cryovac sale d should be refunded. That shareholds received the payouts in all innocence akes no difference, the firm says.

Other companies in trouble are tak-g note. At what's left of Polaroid, Presi-nt Kevin Pond says he's not wild about Owens Corning-style move but would t stand in the way if bankruptcy attor-ys think it's a good thing to do. Now lled PDC (One Equity Partners bought ost of the Polaroid assets in July), the mpany paid $153 million in just the last ur quarters of dividends before its ctober 2001 bankruptcy filing.

In the Owens Corning case, at least e company isn't going after small areholders. Owens Corning is pursu-g only big holders who received more an $100,000 in dividends. That cludes such institutions as Fidelity anagement & Research ($4.8 million ceived, 1996-2000), Franklin Advisers 5.3 million) and Sanford C. Bernstein Co. ($5.9 million). None of these firms ould comment.

An Owens Corning spokesman says e company has no choice but to try to cover the payouts; once a company es into Chapter 11, it is obligated to rve creditors, not shareholders. And at ast the pockets it is trying to pick are ep ones. But if Owens Corning can ll off this ploy, what will stop other nkruptcy filers from coming after erage investors?

Nothing in the Grace ruling is limited just asbestos cases, bankruptcy lawyers y. "The boy has bit the dog here," says mes D. McGinley, a bankruptcy attor-y at Edwards & Angell in Boston. Even mpanies guilty of accounting fraud, he ys, could end up trying to claw back eir dividends. Yes, even Enron. In its last ur quarters of dividends it paid out 72 million. An Enron spokesman, told the Owens Corning move, says the mpany will alert its lawyers. F

# Who Me, Rich? The folks on our latest ranking of wealthiest Chinese businesspeople rarely boast like Donald Trump, for good reason. BY RUPERT HOOGEWERF

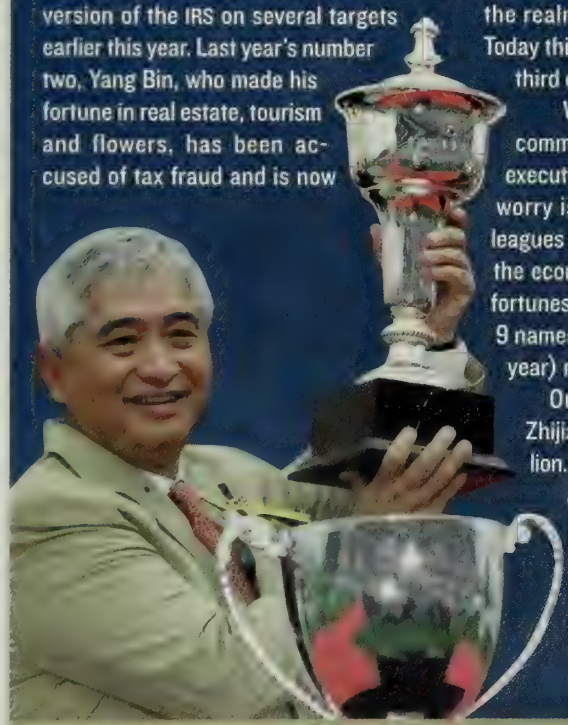
**Glamour-hungry business barons?** Not in China. In a nation with a history of beating up its commercial class, successful entrepreneurs keep their heads down. That's not so easy with FORBES around. Our fourth annual list of China's 100 richest businesspeople is a comprehensive roster of those who have hit it big in the modern Middle Kingdom.

Trouble is, our conclusions aren't lost on the still-authoritarian state. Although most of the listees appear to be dutiful taxpayers, Premier Zhu Rhongi unleashed the Chinese version of the IRS on several targets earlier this year. Last year's number two, Yang Bin, who made his fortune in real estate, tourism and flowers, has been accused of tax fraud and is now under house arrest. He's off our list. No wonder our wealth estimators found candidates even less forthcoming than usual.

Those who made the cut this year *(see www.forbes.com/china)* have a minimum net worth of $84 million (The Forbes 400 cutoff this year was $550 million). That's hard to keep quiet in a country whose average annual per capita disposable income is less than $850 (rural folk make less). While we estimate that 25% of those on our list belong to the Communist Party, most of the new wave of Chinese capitalists make their money outside the realm of creaky old state enterprises. Today this private sector makes up at least a third of China's $1.2 trillion economy.

What a change. After the 1949 communist revolution businessmen were executed. Now Chinese capitalists' biggest worry is the same one that troubles colleagues worldwide: global changes that roil the economy, creating opportunity for new fortunes and tearing down old ones. A mere 9 names from our 1999 list (of only 50 that year) made the cut this time.

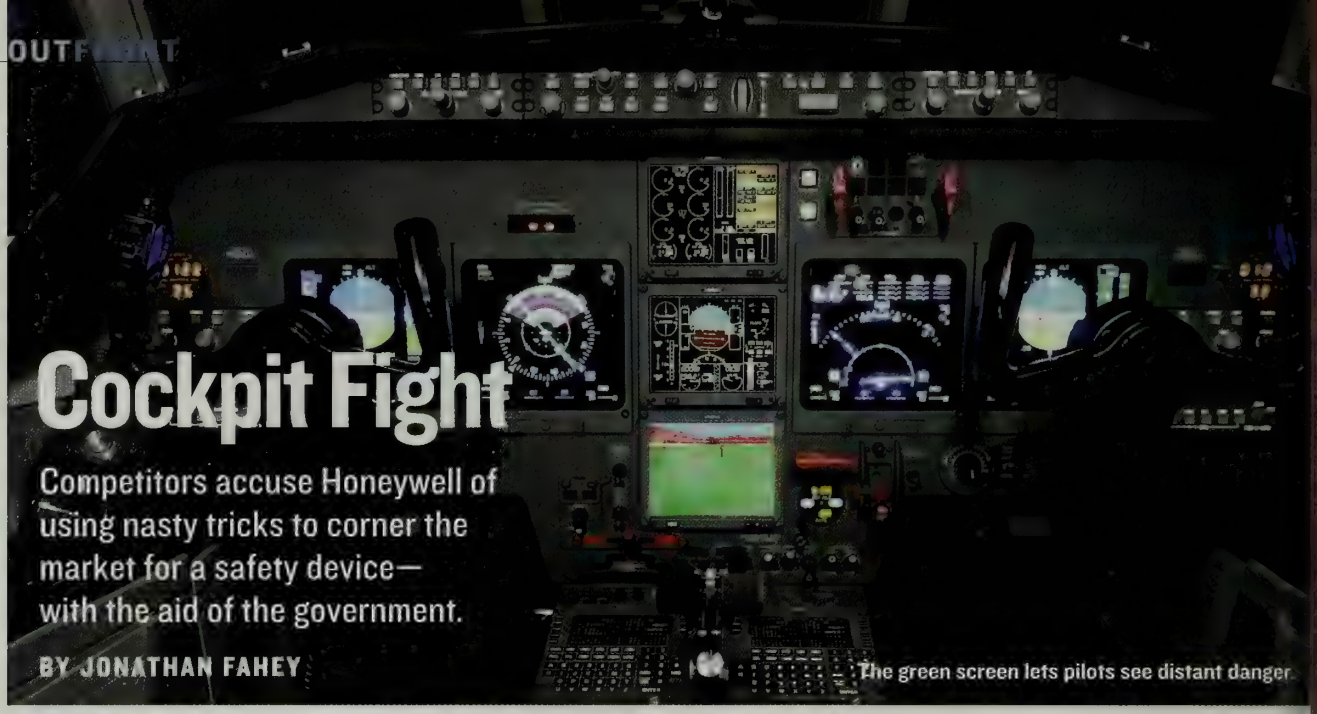
Our new number one is Larry Rong Zhijian, 60, up three places and $70 million. Coming from China's nearest thing to a family dynasty, Rong is a financier through his Citic Pacific. Last year's number one, the Liu brothers, dropped because their businesses have been separated. F



Number 1: Rong of Citic Pacific is champ this year.

## Top 10 Wealthiest Comrades

| $millions | Name / Age | Location | Business |
|---|---|---|---|
| $850 | Larry Rong Zhijian / 60 | Hong Kong | infrastructure, real estate, marketing and distri |
| 780 | Xu Rongmao / 52 | Shanghai; H.K. | real estate: Hong Kong, Shanghai, Beijing |
| 600 | Sun Guangxin / 40 | Xinjiang | Urumqi real estate, building materials and natural gas |
| 570 | Lu Guanqiu / 57 | Zhejiang | auto parts |
| 560 | Chen Lihua / 61 | Beijing | Beijing real estate and sandalwood museum |
| 540 | Liu Yonghao / 51 | Sichuan | animal feed, finance and real estate |
| 540 | Ye Lipei / 58 | Shanghai | Shanghai real estate |
| 480 | Liu Yongxing / 54 | Shanghai | animal feed |
| 360 | Guo Guangchang / 35 | Shanghai | Shanghai real estate, pharmaceuticals and retail |
| 360 | Liu Hanyuan / 38 | Sichuan | fish feed and farming |



# Cockpit Fight

**Competitors accuse Honeywell of using nasty tricks to corner the market for a safety device—with the aid of the government.**

BY JONATHAN FAHEY

The green screen lets pilots see distant danger.

ONE OF THE BIGGEST CAUSES OF airplane fatalities worldwide is described as "controlled flight into terrain." In English: crashing into a mountain the pilot didn't see. So two years ago the Federal Aviation Administration mandated that, by 2005, most planes must carry a new system that warns pilots early on if they are flying toward disaster. Honeywell was the only maker of such a device at the time. Rivals eyed a new $1 billion market to outfit 30,000 aircraft with systems costing $20,000 to $75,000 each.

Four companies rushed out their own systems and started selling as early as summer 2000—and then they crashed into a legal mountain. Honeywell, an aerospace giant with $24 billion in sales, hit all four with patent-infringement lawsuits filed in May and August of this year. Now the defendants charge Honeywell with dirty tactics that are slowing adoption of the new safety instrument, the Terrain Awareness and Warning System.

The competitors say Honeywell lobbied the FAA and snookered it into requiring specifications that bear an eerie resemblance to the features that Honeywell has patented. They further say their bigger rival applied for the patents before the FAA first proposed the new rule in spring 1998—without revealing its interest to the agency. And the rivals accuse Honeywell of trying to scare plane owners into ordering only Honeywell gear.

"If you build something to the specifications of a mandated rule, you don't expect to be sued," says Gerald Block, chief executive of Sandel Avionics, based in Vista, Calif. and one of the four players under attack from Honeywell. (The other three are Universal Avionics of Tucson, Ariz., Goodrich Corp. of Charlotte, N.C. and ACSS, based in Phoenix.) But Francis Daly, who runs Honeywell's Air Transport Avionics division, counters that this is merely a blatant case of patent infringement. "Our system was lifted wholesale," he says. "They didn't have to do it this way." He readily admits Honeywell helped set the rule and that the company, indeed, didn't reveal its patent hopes to the FAA—because it wasn't required to do so.

The devices help pilots avoid "terrain" by coupling global-positioning technology with flight data on speed, altitude and other readings, and a database containing the topography of the planet. Airlines began installing Honeywell-made systems in their large jets in 1996, after an American Airlines crash in Colombia. Soon the FAA wanted to make the systems mandatory for turboprops and jets with six or more seats.

When the mandate came out in 2000, competitors say, it closely resembled Honeywell's patents. Honeywell's competitors also argue that it misled the European Commission. When the panel okayed AlliedSignal's 1999 acquisition of Honeywell (the merged outfit assumed the Honeywell name), the companies assured regulators that rivals would be able to enter the market for the new safety systems. "[Now] they've taken a position that nobody else can make one of these products," accuses Scott Bornstein, a lawyer representing Universal Avionics.

Honeywell denies those assertions and says the FAA order specifies only what the safety device is required to do, not how it should do it. It is entirely possible, a spokesman says, to build a new system without treading on Honeywell patents. The FAA says it issued the rule simply to make airplanes safer. "At no point do we concern ourselves with what goes on in the marketplace or about which companies can meet our standards," says Paul Takemoto, an FAA spokesman.

The legal strategy has won Honeywell an edge as some owners buy its device or delay installing rival gear. That's good for shareholders—but not for passengers. Some planes are flying without it.

**By the Numbers**

A new safety device and an FAA mandate make for big business—and a big fight.

**2,152** Air fatalities from 1992 to 2001 caused by unseen terrain.

**10,000** Aircraft outfitted with new terrain-awareness system.

**23,500** Mandated aircraft yet to install the new system.

*Sources: FAA; Sandel Avionics.*

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# Client Acquisition? Admen Maurice and Charles Saatchi may have devised a new way to win clients—buy them. BY ALLISON FASS

**Leave it to idiosyncratic Maurice and Charles** Saatchi to come up with an unorthodox method that could bolster business for their London-based ad shop: The brothers are buying brands that their agency may help relaunch.

Perhaps the world's best-known ad executives, the Saatchis opened M&C Saatchi after shareholders of Saatchi & Saatchi, their original ad agency, ousted high-living Maurice as chairman in 1994. The brothers struck back immediately by opening M&C Saatchi and later stealing a client, British Airways, which they still have. Today privately held M&C Saatchi clients include Foster's beer and General Electric, and it claims billings of $1 billion. (*Advertising Age* puts 2001 billings at $577 million.)

More than just an adman: Maurice.

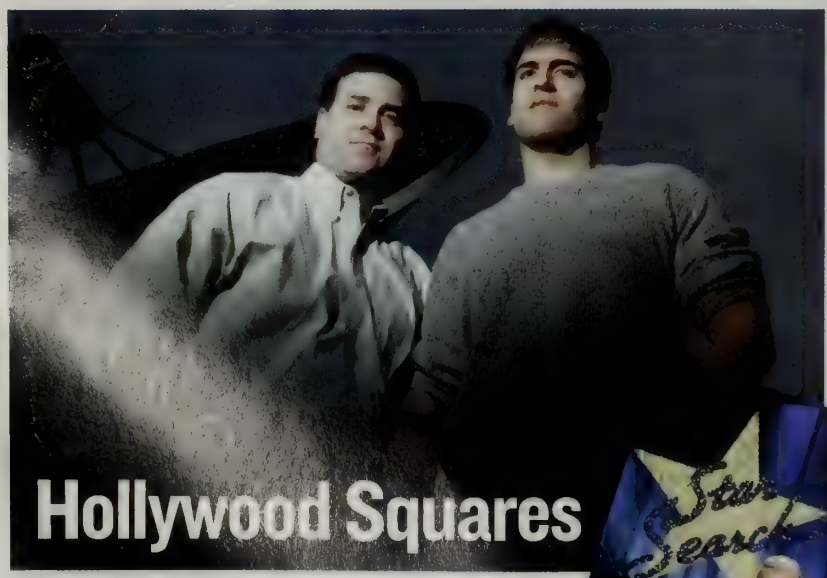
Ever resourceful, the Saatchis and their agency partners now are investing in profitable but undervalued brands shed by consumer-goods giants that are paring their holdings. They hope to reap long-term returns as they acquire five or six brands, boost their sales and eventually sell them. Short-term, the agency may lend a hand in repositioning brands they acquire—and get the fees.

The brothers (and three other partners at M&C Saatchi) recently paid H.J. Heinz Co. an undisclosed sum (at least $10 million) for a 51% stake in two product lines: Complan meal-replacement drinks and Casilan protein supplements. Heinz held on to a 34% stake and will continue making the products. The Saatchis formed new company, Complan Foods, and hired away Hei managers of the brands, handing them a 15% stake the new concern. They already have begun working new marketing with M&C Saatchi's direct-marketi unit, Lida. Once the brands are burnished, they can sold at a tidy profit, says Andrew Leek, who ru Saatchinvest, the unit that handled the purchase a set up the new food company.

The brothers Saatchi have a history of recognizi undervalued assets. The elusive Charles, 59, h amassed an impressive modern art collection in part acquiring work by artists before they are discovere Heard of Jenny Saville?

As far as Saatchinvest is concerned, the Saatch are most interested in consumer goods, including sports apparel a distilled spirits. Maurice expects no shortage of opportunities as se eral behemoths, including Unilever and Procter & Gamble, plan to dun some marginal brands. Procter recently sold brands like Clearasil a Comet. He confides that he does not rule out rummaging among his ov agency's clients—which also include Nestlé and Pfizer—for brands buy. Says Saatchi, 56: "Many people have come to us and said, 'V have many of these brands; we don't know what to do with them.'"

Good thing the Saatchis do.



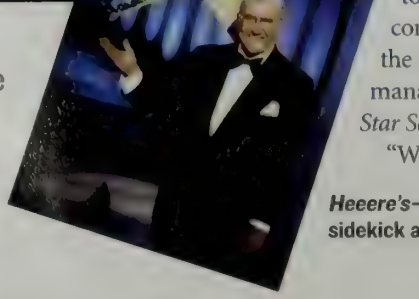
# Hollywood Squares

Mark Cuban and Todd Wagner got rich off the Internet bubble and survived the crash. Now comes something really scary: They're gambling their loot in Hollywood. BY DOROTHY POMERANTZ

FOR INTERNET BILLIONAIRE MAR Cuban and his longtime partner, Toc Wagner, their September deal with C for a nine-episode remake of the chee old show *Star Search* seemed like y another masterstroke of fortuitous timing. "C and billionaire Mark Cuban are on a tale hunt," the *Hollywood Reporter* swooned, noti how the deal was struck at the height of pop larity of Fox's latter-day hit *American Idol*.

It was just the latest addition to a Hollywoo portfolio the two Internet tycoons have quiet been assembling for the past year. They ow the rights to *Star Search* through tl Rysher Entertainment film librar which they acquired from Cox Broa casting for an undisclosed sum believe to be less than $300 million. Their ne company, 2929 Productions, will produ the show, and they have taken a stake in management company that will launch *Star Search* road show nationwide.

"We need a host with personality but n




***Heeere's*—Todd and Mark? Cuban and his own sidekick are remaking Ed McMahon's *Star Searc***

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too much personality," muses Wagner, sitting in the dining room of the swank Beverly Hills Hotel, where the transplanted Hoosier was staying during a recent visit.

Wagner, 42, and Cuban, 44, sold at the top: Broadcast.com, the Web video service they founded, got bought by Yahoo for $5.7 billion in Yahoo stock in April 1999, when the shares traded at a split-adjusted $87. They cleared $705 million and $1.3 billion respectively, and they avoided big losses as Yahoo fell to $9 by setting up a zero-cost collar. Still flush, they are betting millions in Hollywood with an intent that goes beyond that of other Hollywood neophytes (who typically want to meet starlets or get a good table at the Ivy). They are banking on the day when their background as early Internet broadcast entrepreneurs will let them exploit the digitization of entertainment content. Until then, Wagner is learning the ropes.

Cuban also is co-owner of HDNet, a fledgling high-definition television venture *(see story, p. 141)*. Though it's the nation's only such channel— available only on DirecTV—it reaches just over 200,000 homes. HDNet is woefully lacking programming, offering a desultory assortment of shows ranging from college football to documentaries on female Pueblo Indian potters.

"It's all about providing content or distribution coming back to HDNet," enthuses Cuban, better known these days as the hotheaded ref-baiting owner of the polyglot Dallas Mavericks basketball team. Wagner doesn't own a stake in HDNet—"There are applications for HD, of course, but it doesn't drive the train of things I'm doing"—though he sounds like someone who has gone native.

**"I've got a few dollars in the bank," says Wagner. "If it doesn't work out, I'm okay."**

"There are synergies—hopefully," says Wagner, who has been hanging around with Arnold Schwarzenegger. He is helping bankroll idiosyncratic art house flicks like *Searching for Debra Winger*, a $600,000 feminist take on the the difficulties of aging women in Hollywood. He watches over his and Cuban's investments in Lions Gate Entertainment (Cuban bought a 6% stake for $5.6 million). The smallish independent producer ($273 million in fiscal 2002 sales) has turned out such curiosities as the *Leprechaun* horror series, about a pint-size killer.

If anything, Wagner says he is mostly in town to gain an education about the business, albeit an expensive one. "The more people I know, the more opportunities we have to tie in some of the things we know from the tech world," he says. "But I've got a few dollars in the bank. If it doesn't work out, I'm okay."

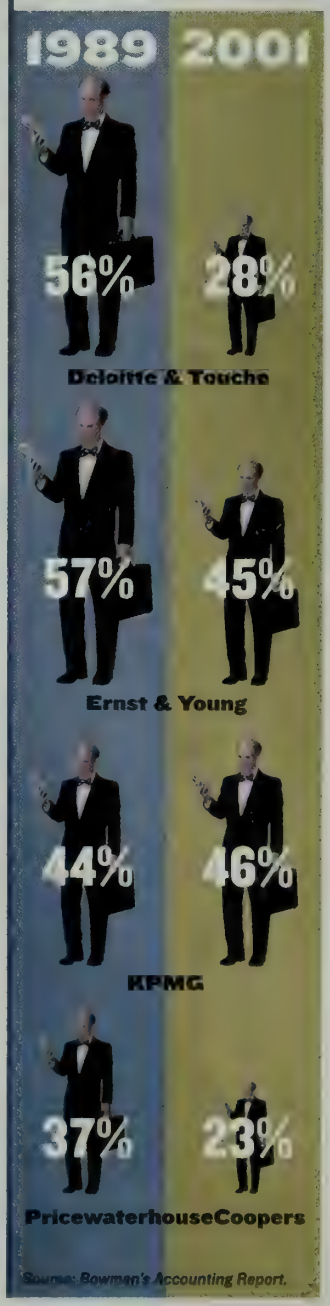
That is just as well. "The new source of capital in town always gets a pretty good working-over," says Morgan Rector, president of Comerica Entertainment Group, which arranges film financing. "Unless you're very careful, you're likely to get stuffed." F

# Next Time, Hire an Accountant

## Where have all the CPAs gone? BY LYNN J. COOK

### Shrink Rap

The disappearing act of CPAs (reflected as a percent of total professional staff) has taken place at every firm except for KPMG.




**When Arthur Andersen collap** like a cheap folding chair, no one seemed to notice another casual This one—the dwindling number certified public accountants at t Big Five, now the Big Four—didn happen overnight. In 1989, for example, 40% of Andersen's Hou office consisted of CPAs. By 200 was down to 16%. The trend doe inspire confidence: Bookkeepers balance the books, but CPAs are theoretically better trained to sn out skulduggery and certainly ha more authority to challenge clier

Why the shrinkage? Fewer students are sitting for the CPA exam—26% fewer between 1990 2001, says the National Associat of State Boards of Accountancy. That's because most states phas in a 150-hour education requiren during the 1990s; the average fo year college graduate has little incentive to stay in school anoth year to take the test. There's bee steady devaluation of the profes The big houses "treat their youn accountants like trash," says Ar Bowman, who runs an accountir newsletter. "For those high-reve generating areas they focus on, taxes, CPAs don't add much valu

Every publicly traded compa the U.S. has to report quarterly earnings, signed off on by an independent auditor who is a CP the SEC. But the drones who act look at the books are often non- trained over six or eight weeks t in the blanks on standardized fo That's just the way the Big Four their clients like it, opines Jonat Hamilton, senior editor of the Pu Accounting Report. "If you know you're cutting the edge," he says "you don't want CPAs looking ov this stuff."

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# Twice Bitten, Once Shy

Spurned by the NBA and burned by the XFL flop, NBC turns to an obscure game—for sports on the cheap.

**BY MONTE BURKE**

IT SEEMED ALMOST LIKE A HILARIOUS MISTAKE. STARTING IN February, the announcement went, NBC will televise up to 70 games of the Arena Football League over 20 weeks on Sunday afternoons—for 12 years the exclusive province of National Basketball Association games. Arena football, the quirky pigskin hybrid played with teams of eight on a 50-yard indoor field?

It's a curious deal for the "must-see-TV" network. For years NBC spent billions securing the rights to NBA games, the NFL and Major League Baseball. Since 1998 it has passed on—or been passed over by—most every big sports contract to come up for bidding. Then NBC turned to the XFL, owning the football league 50-50 with World Wrestling Entertainment. That flopped, and NBC lost $35 million. The low point came last December: After holding on to the NBA for 12 years, NBC bid $1.3 billion for four years more—and lost out to ABC/ESPN, which bid almost $100 million more a year, a 30% premium. Perhaps they walked for a good rea-

**Televise me, please: AFL team owner John Elv**

son: NBC lost $300 million on the NBA in t last two years.

The AFL, by contrast, almost guarante NBC won't lose a dime. It's everything big p sports is not: incredibly cheap and unusua compliant. Under the new two-year contra NBC paid nothing for exclusive TV rights, a it will own them for as long as it wants to. N can renew every four years after that—at t original terms and conditions.

"We've minimized our risk," says Kenne Schanzer, NBC Sports president. "This is som thing that can have value for a long time wit out the threat of being stolen away." Ad sa will be split 50-50 but only after NBC, and th the league, cover production costs. NBC won't own equity in t AFL, but it will share in profits if a team rises in value and gets so

The AFL, in return, gets something that has largely eluded it 16 years of play: exposure. The AFL is at best minor league, know primarily for launching the career of Kurt Warner, now a star qua terback in the NFL. Average game attendance is only 10,000. T AFL's 16 teams have a payroll cap of $1.6 million—total—fo roster of 24; Warner will earn $8 million this year alone.

Yet the value of an AFL franchise has risen in six years fro $400,000 to $12 million, climbing on the cachet of the ownersh which includes retired Denver Broncos quarterback John Elw and Dallas Cowboys owner Jerry Jones.

But for NBC this is a time of lowered expectations. The AFL expected to draw less than 2% of households, on a par with t Westminster Kennel Club Dog Show. "This is more of a circle-th wagons approach to sports programming," says media buyer Jo Rash. "It limits the downside—but it also limits the upside."

## CEO Lout

**How much does the public hate chief** executives? Thomas Stern knows. Eighteen months ago Stern, 47, who owns an executive search firm in Woodland Hills, Calif., got a good idea. The economy was heading south, so he decided to apply his downtime to creating a comic strip depicting the domestic foibles of a pompous if lovable chief executive. Its title: *CEO Dad*.

Nine months and innumerable test strips later, he wasn't so sure. Newspaper syndicates and magazines sent rejection letters. For a while it looked like *CEO Dad* would be *CEO Dead*. Then, he says, "something wonderful" happened: the Enron scandal. WorldCom. The chief executive of Adelphia being led away in handcuffs. Suddenly a strip featuring a pompous CEO seemed timely, edgy. Editors began returning calls.

As the public has grown more outraged, suggestions for strip plotlines have grown violent. One has CEO Dad in prison, stocking up on cigarettes to trade for a new Palm handheld. Another: that CEO Dad be run over by a steamroller or publicly executed.

The furor hasn't translated into too many sales yet—*Chief Executive* magazine will run the strip in its December issue, and a paper in the Midwest bought about 75. But the headhunter insists the bilious momentum is building: "If the economy collapses any further, we could be looking at the next Dilbert." —*Alan Farnham*

OTED BEST BLEND.

t place: The Famous Grouse

| | |
|---|---|
| d place: | Pigs Nose |
| l place: | Ballantine |
| n place: | Dewar's, Johnnie Walker Red |
| n place: | Cutty Sark |
| n place: | J&B |

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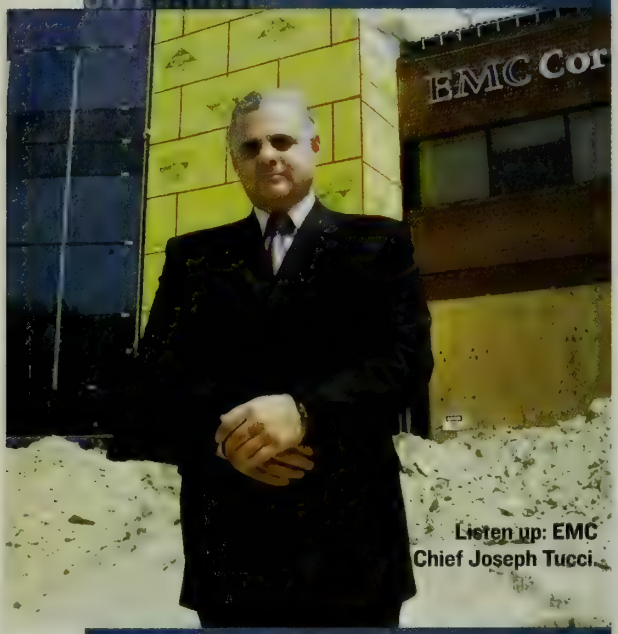


Listen up: EMC Chief Joseph Tucci.

## Play Nice—or Else!

It's not easy biting the hand that feeds you. Look what happens to Wall Street stock analysts who say something bad about a company. Now market research analysts, whose firms get paid by the companies they study, say they are learning this lesson with EMC, the Hopkinton, Mass. data storage company led by Chief Joseph Tucci.

A trade magazine published information about an unannounced product from EMC a couple of months ago, prompting the company to launch a Captain Queeg-style inquisition to find out which research analyst had leaked the secret. "My instincts tell me I have one bad apple. Help me identify that person," EMC's director of analyst relations wrote ominously, in an e-mail that analysts found amusing and appalling.

It was just one example of what these analysts—all talking anonymously, of course—say is a ratcheting up of EMC's tough-guy tactics. More recently, an analyst who was quoted in a trade magazine criticizing EMC got an irate call from an EMC guy who hissed, "You should be prepared for further action on our part." The poor analyst now wouldn't dare be quoted by the press. Another analyst got a dressing-down for publishing a report without first submitting it to EMC for editing (the standard practice)—even though the report said good things. That analyst has since curbed coverage of EMC: "I wiped my hands of them."

EMC spokesman Mark Fredrickson says the company treats analysts the same way all companies do. "If you get something wrong about EMC, you are going to hear from us," he says. —*Daniel Lyons*

# Food Fight

### Why is a popular—and healthy—meat substitute under such relentless attack? BY MICHAEL FUMENTO

TONY SOPRANO HAS NOTHING ON THE CENTER FOR SCIENCE IN THE PUBI Interest. Fresh from deep-sixing Olestra, Procter & Gamble's noncaloric substitute, it's now trying to whack a popular and healthy meat substitu called Quorn, from U.K.-based Marlow Foods Ltd., a unit of AstraZene Made from a fungus called "mycoprotein," it's used in 90 imitation beef a chicken products and is Europe's top-selling meat alternative.

No matter that Quorn received approval from the Food & Drug Admi istration early this year, after a rigorous five-year process. "This product v cavalierly waved through by the FDA with an alarming lack of curiosity," s the center's executive director, Michael Jacobson, "considering that the F knew a study showed that this product would make some people violen sick." It petitioned not only the FDA but also European health agencies yank all Quorn products.

The British Food Standards Agency rejected the center's petition, noti that confirmed reactions seemed to occur about once per 146,000 mycop tein customers—a figure, admittedly, supplied by Marlow. But t agency also noted that allergic reactions occur about once 300 times for soybeans, the prime ingredient many meat substitutes.

One man's meat: targeted.

Jacobson wrote in his newslet that "the only human study Quorn" Marlow submitted to t FDA "shows nearly 10% of the peo who ate Quorn [felt] nauseated"; t was picked up by the Associated Pre Yet, at about the same time, the cen sent the FDA a letter noting the agency h evaluated *four* human studies back in 19 Jacobson now insists the study he ch "was the only one I knew of at the time." I he interpret it correctly? The study showed virtually the same sympto among mycoprotein eaters and a placebo group; its one confirmed reacti in 200 subjects, say the study's authors, probably wasn't related to the foo

Mycoprotein actually seems to reduce LDL ("bad") cholesterol, raise H ("good") cholesterol and lower postmeal appetites, according to Sanfo Miller, former FDA director of the Center for Food Safety & Applied Nutriti

So what's the CSPI's real beef? Perhaps it can be found in its assertion to FDA that "considering the plethora of tasty, nutritious meat alternatives on permarket shelves, there is absolutely no need for [Quorn]." The center has lo been a booster of Gardenburger, the moneylosing, substitute-meat maker. T company has returned the favor. In the acknowledgments to his vegan co book, *Garden Cuisine*, Paul Wenner, Gardenburger's chief creative officer, nan Mahatma Gandhi, Jacques Cousteau, Rachel Carson—and Michael Jacobs As its stock began a 74% dive in April, Gardenburger e-mailed food broke copy of CSPI's letter to the FDA documenting alleged reactions to Quorn— fore the FDA could respond—and speculated that "Quorn's days are nu bered." Gardenburger is not getting favorable treatment, the center says.

Still, saving Gardenburger's bacon would be a coup for the center. I neither science nor the public interest would be served.

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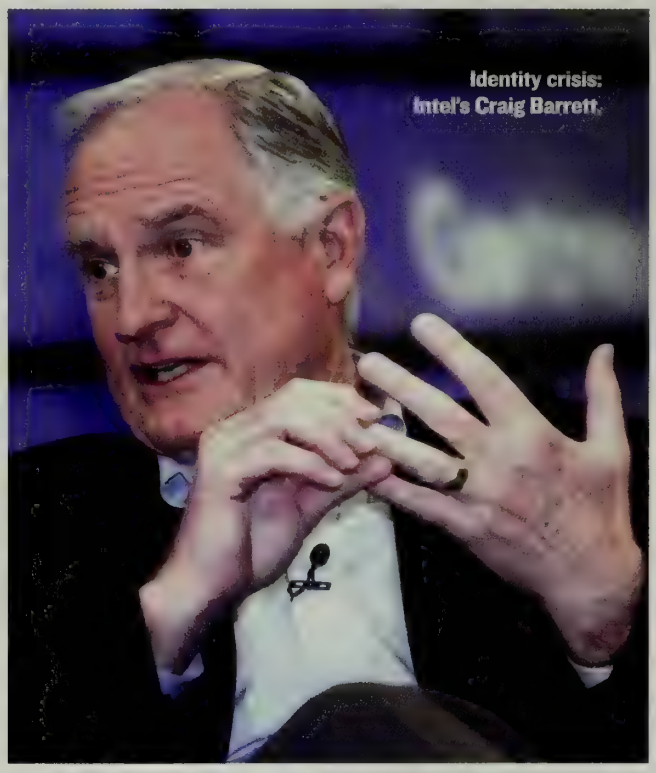

Identity crisis: Intel's Craig Barrett.

## Split Personality

Addressing a big technology conference in Orlando recently, Intel Chief Executive Craig Barrett had this to say: "I got [here] this morning, and there was a supplier to the semiconductor industry whose stock had been hammered. The first question to him began, 'Craig Barrett said over the weekend that things will get better in 2003.' My first thought was, 'Who's Craig Barrett, and why would anyone say that?'" —*Quentin Hardy*

## CNBC: The Roadmap for Short Sellers?

A new academic study suggests that the investor-junkie audience of CNBC, which amid sour markets dropped its slogan "profit from it," can still make money—by shorting the stocks of chief executives interviewed on the air. Arizona State University finance doctoral student Felix Meschke writes that those stocks tend to surge starting two days before the interview and then underperform for the ten days after the interview by an average 2.8%—a big drop for so short a period. Meschke's 47-page paper will be presented in January at the annual meeting of the prestigious American Finance Association. —*Ira Carnahan*

## Duh!

Last month the General Accounting Office dismissed a challenge by rival telecoms to the award of a big U.S. Department of Defense contract to WorldCom—which, of course, has filed for bankruptcy amid allegations of fraud and other wrongdoing. But in a footnote to its formal opinion, the GAO solem offered this advice: Defense "may wish to consider whethe needs to take further action to protect the government's intere in connection with this procurement." —*Janet Nov*

## Here's His Sequel: "Auditing a Demigo

New York publisher HarperCollins has just paid an undisclo sum for a memoir by an undisclosed—but still active—Inter Revenue Service agent using the pen name Stewart Biss According to his agent, Brian DeFiore, the book, tentatively tit *Demigod: The Confessions of a Tax Collector*, will give a "mesmerizing insider's view of the cults of personality, the coverups, the illicit affairs." But DeFiore won't say if anyone real—agency employees or taxpayers—will be named in a negative context. —*Tomas Kellner*

## A Nobel Prize on the Cheap

"The pride of Shimadzu Corp.," company President Hidetoshi Yajima crowed last month about Japanese researcher Koichi Tanaka, who won part of the 2002 Nobel Prize for chemistry. Tanaka, 43, was honored for developing a new way to measure proteins, an innovation that has revolutionized the drug industry and brought great profits to Shimadzu, a publicly traded precision-instruments firm (annual revenues, $1.6 billion) based in Kyoto. But back in 1985, when Tanaka made his big discovery, the firm gave him a bonus—$90. Tanaka remained, but such meager rewards have helped create a serious brain drain in Japan, to the delight of international headhunters.

—*Benjamin Fulford*

## MEALS for PALS

To enforce a summons in an investigation of allegedly abusive tax shelters peddled b KPMG, the Internal Revenue Service recently filed in court what it called the names of 66 "tax shelter strategies" provided by a confidential informant with apparent acces to KPMG records. Here are som of the more intriguing moniker listed. The accountancy declined comment. —*J.*

BLAST
Dot-Bomb-Monetization
Tempest
Busted 351
Mixing Bowl
Enhanced Mixing Bowl
Othello
Alhambra
Basis Leap
Basis Improvement
A&M Base Shifting
Mitigation
SC2 Gain Mitigator
U.S. Withholding Tax Eliminat
Leveraged Disposition
21% Solution
Pathfinder
Cative Tune-Up
PALS
LADD
B-FLIP
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I'm not here right now: Salesmen won't leave David Guzmán alone.

Forbes
NOVEMBER 11, 2002

# The Undead

## No wonder tech customers are in hiding. They are under assault from hordes of software companies that don't deserve to exist. It's time for a shakeout—but who's gonna do the shaking?

BY VICTORIA MURPHY AND QUENTIN HARDY

DAVID GUZMÁN BUYS SOFTware for a living. He likes the stuff, but even he can't stand how many makers are trying to sell it to him these days. As chief information officer for medical supply distributor Owens & Minor, he spends millions on software, making him a prime target for hordes of desperate salesmen.

He gets hundreds of pitches every week from a mind-boggling array of vendors. Some 549 publicly held software makers market their wares, plus hundreds more private shops that few people ever hear of. In the past year Guzmán has quadrupled the size of his voice-mail inbox to 140 calls—and still it jams up with unsolicited come-ons. He gets another 50 e-mails a day, mostly from software outfits that are unknown to him. His assistant spends most of her time clearing out the clutter.

Guzmán doesn't even bother scanning the piles that arrive by messenger and mail, shunning the letters and brochures and even the gifts—chessboards with pieces intentionally withheld, golf clubs with a missing putter, a free cruise. "My idea of the ideal cruise," he says, with obvious sarcasm, "is being cloistered out on the ocean with hundreds of vendors, a long swim away from shore." He adds: "Nothing will get through to me. It's a stack every day—I ignore it every day."

In a normal world, it would not be this bad. The software business should be a field of corpses by now, buried by a long downturn in business spending, and freeing the David Guzmáns of the world to choose among the thinning ranks of healthy and relevant survivors. Yet two years into the biggest bust in high-tech history, an estimated 10,000 public and private software firms still do business. They all want a piece of a shrinking pie. Software spending is in decline after years of fervid growth, down 6% this year to $75 billion globally, according to research firm Meta Group.

What's needed is a good old-fashioned shakeout, a nasty but necessary part of a free market. But who is strong enough to do the shaking? Most stocks are so depressed that they're useless as currency. The only real software player—Microsoft, who else?—has $36 billion in cash but little inclination to go shopping. "We're not on a buying spree," says Jeffrey Raikes, the Microsoft group vice president who runs the $9-billion-a-year business applications and services group.

Even the professional dealmakers are loath to take a gamble on buying trouble. "Can you spot value in this morass of carnage? The truth is, most of these companies should die," says James Davidson of Silver Lake Partners, a private equity firm in Silicon Valley.

Yet many teetering software houses are unlikely to simply go away and expire. Many of these firms hit it big during the boom, raising massive piles of venture money or hitting a homerun in an initial public offering. They have too much cash on hand to allow a quick and healthy consolidation, despite lagging sales and persistent losses *(see table, p. 64)*.

The overpopulation problem could continue for a while. It is bad for suppliers and a huge hassle for customers, who end up struggling with a kind of corporate incoherence. Motorola recently compiled an inventory of its in-house tech systems and found that the company had eight separate deals in the works with six rival vendors of corporate search engines. Yet headquarters had a standing deal with Inktomi for almost unlimited

use of its version of the same thing. "We killed the other eight, fast," says Toby Redshaw, Motorola's head of information technology strategy. "I don't want any more software licenses we can't use."

Paul Gaffney, chief information officer at the 1,440-store Staples chain, says almost half of the 30 to 40 calls he gets each day come from software hawkers pitching him products that have no clear connection to his business. "It's like we don't have an agenda and are sitting around waiting for an opportunity," he says. "So on blind pitches, I'm more likely to go with the larger technology providers."

Other customers use the glut to grab better deals. At Putnam Lovell NBF, owned by National Bank of Canada, Chief Technology Officer Rodric O'Connor says, "We've managed to save 30% on our software services costs," or $150,000 a year at the 150-person securities firm. Good for him, but bad for software sellers—and their shareholders.

Upstart software makers, however, vow to keep scratching for survival. Interwoven, of Sunnyvale, Calif., has almost $200 million in the bank. "Our cash can last a decade or longer," boasts John Van Siclen, chief executive. Interwoven sells document management software that lets

companies troll through and categorize files and Web pages. Nice, but Interwoven hasn't been profitable in two years and similar stuff is peddled by at least two dozen rivals, including Microsoft and Oracle; five smaller direct entrants have a total of $776 million in cash.

Van Siclen has laid off a quarter of his staff to combat losses that currently total 53% of revenues. Yet he would rather hold on to cash than try to absorb his competitors. "You would m an acquisition if you think can get a new technology. Bu one cares; no one is buying, says. "You size the comp appropriately to be able to for many years."

At Nuance Communicati which makes "voice-to-mach software that lets computers ognize or generate spoken wo Chief Executive Ronald Cr ticks off a partial list of ot players: Tellme, SpeechWo BeVocal, HeyAnita, plus rese arms and spinoffs from the l of Lucent and BT Group. "I c give a list of 50 companies in same business, but I can't fo them all," he says. But h undaunted: Nuance has $ million in cash from its two public o ings. "Without market developmen doing anything intelligent, we can still four more years," says Croen, who rece announced he is looking for a successo

But if everyone hangs on, nob profits. Many in high tech fret over l long these firms will wait for each o to die—akin to a game of musical ch or the last stand at the Alamo, depen on whether you are a watcher or a pa ipant. "This bottleneck has to rationalized," says Terence C nett, who invests in software venture firm Venrock. "H many do we need? One hun software companies? Mayb and a few small ones to things into them."

The weaklings are long never-say-die attitude. Despit the high-tech turmoil, a mer publicly held software ou have been acquired within past two years. "We've b going to the smaller compa to see if they'd consider put themselves up for sale, but th no sense of urgency," says R Horsey, managing directo Banc of America Securities.

At Convera, a Vienna, provider of document se software, sales fell to $5 mil

## Built to Last?

These software firms have enough cash to last a while, but will anyone care? They're losing money, growth for most is iffy, and corporate buyers are numbed by lookalike sales pitches.

| mpany | LATEST 12 MONTHS operating income[1] | sales ($mil) | sales growth | Burn rate[2] (months) | Price/ cash | Market value ($mil) |
|---|---|---|---|---|---|---|
| | $-5.6 | $48 | 243% | 149 | 3.0 | $212 |
| Co | -132.8 | 1,625 | -14 | 24 | 5.5 | 1,485 |
| Digimarc | -10.2 | 46 | 26 | 46 | 5.0 | 199 |
| Epiphany | -39.2 | 96 | -1 | 50 | 1.6 | 266 |
| Entrust | -8.7 | 110 | -20 | 52 | 5.3 | 197 |
| I2 Technologies | -261.0 | 660 | -12 | 20 | 0.5 | 216 |
| Legato Systems | -25.5 | 236 | 5 | 14 | 14.2 | 416 |
| Macromedia | -34.3 | 320 | -17 | 34 | 4.5 | 438 |
| Manugistics Group | -35.4 | 292 | 16 | 71 | 0.8 | 157 |
| d Hat | -21.6 | 77 | -2 | 160 | 2.4 | 705 |
| Software | -21.6 | 280 | 27 | 64 | 9.1 | 1,040 |
| V | -37.7 | 297 | -19 | 113 | 0.7 | 250 |

[1]Earnings before interest, taxes and depreciation. [2]Cash divided by operating income, times 12.
*Sources: Market Guide via FactSet Research Systems; company reports.*

STARBUCKS
COFFEE
PASSION IS 100 TIMES
MORE POWERFUL
THAN ESPRESSO.
Howard Schultz
chairman
Starbucks Coffee Company
STARBUCKS
NASDAQ
NASDAQ

last quarter and losses totaled $9 million. Seeking new business from government customers, the firm is trying to survive in a field cluttered with names like Inktomi, Divine and Autonomy, not to mention search giant Google. Still, Convera is holding out. "We've been approached by buyers," says President Patrick Condo. "It's a nice conversation, but valuations are much too low."

Blame that on a dearth of buyers. Several software outfits have stock prices lower than the cash-per-share they have on hand—and even those firms don't incite much interest. "The fact that they have cash doesn't help," says Bernard Liautaud, chief executive of Business Objects, a software shop with annual sales of $416 million. "If they're losing a lot of money, they're virtually unacquirable. We don't want to ruin our profitability."

In some ways, venture capitalists have only themselves to blame. During the boom VCs poured at least $47 billion into software startups, according to VentureOne, fueling some 226 public offerings. Each debut promised untold improvements in corporate efficiency.

In fact, many of these companies never came near profitability, even in good times. The boundless sectors they occupied now look like crowded niches, with multiple companies fighting for a slice of marginal fields like storage management, content management or collaboration management.

It isn't clear whether the backers have learned anything. With 771 venture firms investing in technology in the past six months, and $100 billion uninvested cash remaining, a lot more software companies are likely headed into the marketplace. Software continues to soak up 20% of venture funding, just as they did in the boom years that created this glut.

Nor are titanic hardware makers, some of which are looking to build bigger software sales, a likely solution to the crowded business. Cisco Systems has $22 billion in cash and is eyeing the storage and wireless markets, but Chief Executive John Chambers sees just two or three small acquisitions likely in each area.

At Sun Microsystems, Executive Vice President Jonathan Schwartz would get 50 offers a month to buy software companies. Some venture capitalists "come by with their whole portfolio, saying, 'Buy what you want,'" he says. Sun needs to grow in software to enhance their sagging server sales, but Schwartz expects Sun merely will buy ten (or so) small firms in the next year.

Dell Computer will be similarly choosy, says Chief Executive Michael Dell. "The rational thing to do would be for the [software] companies to just return their money to the investors," he says. As for the rest, he says, "You've got 8,000 to 10,000 companies out there, just ticking away. They'll just clip coupons, or whatever, until this ends."

History shows that salvation can come from innovation, and the strong eventually prevail. Roger Siboni, who heads Epiphany of San Mateo, Cali plans to be in that camp: "Now is not tl time to take your foot off the accelerator

Epiphany has the misfortune of sel ing customer relationship manageme software that helps firms track account a pursuit jam-packed with at least 20 co testants. "There's just such a cacophor of companies, it's almost deafening," sa Siboni. He believes he has a differentiatc In August the company debuted Jav based software that gathers customer da from call centers, sales systems and We commerce applications. Siboni hopes th will account for more than half of tl company's revenue in two years.

Five software shops have gone publ this year. One is Altiris, which makes sof ware that manages companies' high-te inventory. Altiris raised $45 million in initial public offering, and the firm didr have to touch it to pick up two paten and 35 overseas product developers fro a faltering competitor named Previ Price: just $1 million.

But Altiris knows it could be a lo wait for the pack of rivals to thin ou "I've got a database that says I ha 104 competitors, from Marimba Alohabob," says John Epeneter, Altir technical marketing director. "A lot them don't have the capital to expa out of their little niche, but they're n shrinking very fast. You think they shrink more, but the barriers to e try are low. These guys," he says, "a like gnats."

## Gluttons for Punishment

Once-hot software categories are now niches plagued by too many players. Let the game of musical chairs begin.

| Software category | Market size ($mil) | Number of companies | TOP COMPANY name | sales ($mil) | income[1] ($mil) | Main competitors |
|---|---|---|---|---|---|---|
| Enterprise search | $500 | 40 | Verity | $96 | $10 | Autonomy, Convera, IBM, Inktomi, Hummingbird |
| Human resource planning | 961 | 50 | PeopleSoft | 1,980 | 415 | SAP, Oracle, Kronos, Lawson, Deltek |
| Marketing automation | 738 | 75 | SAP | 1,130 | NA | Blue Martini, Epiphany, Kana, SAS, Siebel Systems |
| Sales force automation | 820 | 70 | Siebel Systems | 1,773 | 457 | SAP, Sage, Oracle, PeopleSoft, Amdocs, Salesforce.com, FrontRange |
| Supply chain management execution | 558 | 60 | I2 Technologies | 660 | -261 | J.D. Edwards, SAP, Manhattan Associates, Manugistics, Vertex |

[1]Earnings before interest, taxes and depreciation. NA: Not available, private company. *Sources: Meta Group; Gartner Dataquest; Market Guide via FactSet Research Systems.*

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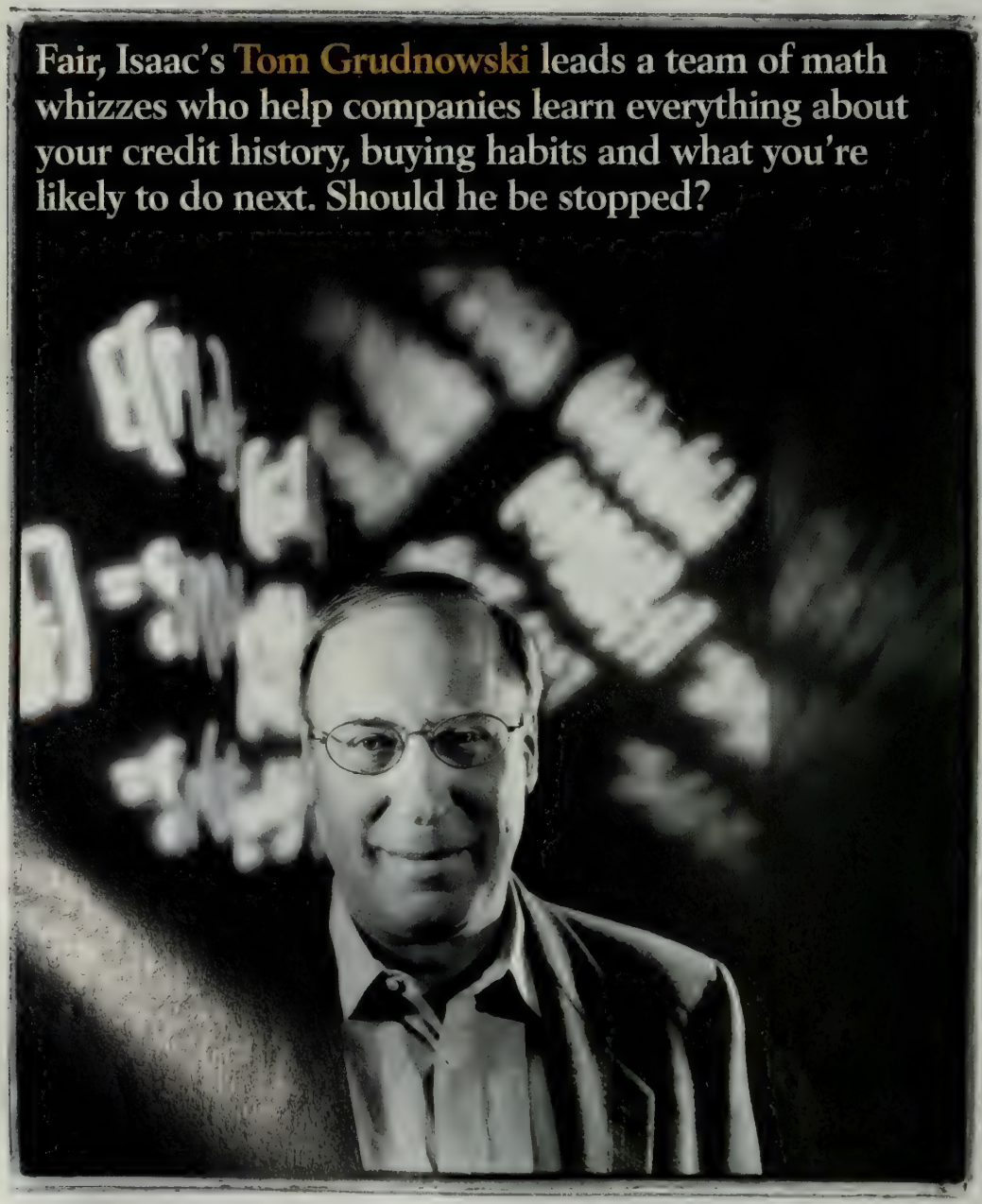
# The Man Who Knows Too Much

BY ELISA WILLIAMS

**Fair, Isaac's Tom Grudnowski leads a team of math whizzes who help companies learn everything about your credit history, buying habits and what you're likely to do next. Should he be stopped?**



IF YOU'VE SHOPPED AT WILSONS LEATHER recently, you may be surprised at how fast the retailer beckons you back. Remember that $60 whipstitch suede halter top you bought? Wilsons can use your zip code and name to sift through myriad marketing databases that describe what kind of car you own, where you live, what magazines you read and what you do for a living. Here's the creepy part: By means of data-mining, the 760-store chain could determine that the halter top was a gift for someone else. So don't expec direct-mail pitch for mat ing $99 suede pants. Giv your profile, Wilsons m send you pitches on $2 Kenneth Cole briefcases a $60 pair of leather glov

How can it do such t geted—and intimate marketing? It hired Fa Isaac & Co., the San Rafa Calif.-based firm bet known for credit-rati scores generated by alg rithms that sift throu home-mortgage and c payment histories a credit card debts, key inf mation that banks, ins ers, telecom carriers a retailers rely on when th do business with you.

Fair, Isaac now packs even greater data wall thanks to its $730 milli acquisition in August HNC Software, which sp cializes in thwarting cre card fraud. Combined, two companies and th posse of 100 Ph.D.s coming up with an ev more sophisticated toolb of formulas to der keener consumer profile

They are devising mathematically genera guess at why you buy, w you're likely to pick up the future—and how mu of a credit risk you are. HNC's software also read text, so it can grab purchasing formation that's far more detailed than often imprecise stock-keeping units, SKUs, used by most databases. That is w Wilsons could guess that you bought

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halter top for someone else: Noting your age, profession and consumer history, it found an anomalous purchase—unless, of course, you're getting into cross-dressing.

It's a lucrative business. Fair, Isaac is expected to earn $82 million on revenue of $600 million this year from 100,000 clients, including Citibank, Wells Fargo, Verizon, Sears and Nordstrom. About 75% of sales comes from royalties on equations, 15% from professional fees and 10% from software sales. It is cutting deals with clients like Wilsons Leather to get a cut of profits derived from better marketing. (Wilsons President David Rogers says the chain now targets 40-year-olds with families, and 21-year-old club kids who share such interests as sports and entertainment and don't have large discretionary incomes.)

"What we really are is an equation company," says Thomas Grudnowski, Fair, Isaac's chief executive. "Just like Intel creates chips that go inside a personal computer, we create equations that go inside these industry networks."

But do businesses have a right to know so much about you? And while telecom carriers, insurers, HMOs and banks use such information to assess your risk as a customer, should they be allowed to parlay those insights to sell you more goods and services? Privacy advocates, who already see Big Brother in every piece of junk mail, are lining up legislators. Bills pending around the nation seek to limit the use of Social Security numbers, often linked to marketing databases. Forty-two states are likely to consider laws in 2003 that would restrict or disclose which companies use credit scores for insurance policies. When a portion of the Fair Credit Reporting Act expires in 2004, Fair, Isaac foes will get another shot at reining it in.

Some groups fear the data will be used to discriminate against whole classes of people—a creep toward financial profiling, if you will. "To what extent will the information create tiers in society where you'd start seeing people with a good record sail through security, or get cheap insurance and get all these other benefits?" asks Mihir Kshirsagar, a policy analyst for the Electronic Privacy Information Center in Washington, D.C.

No one is immune to such scrutiny. Even if you manage to keep your name out of the requisite marketing databases that Fair, Isaac uses to feed its profiling formulas, it can compensate by matching what it does know about you to a detailed profile of someone who is similar. To predict your behavior, the formula assigns a mathematical weight to product features and their relative importance to you. Over time, Fair, Isaac figures out your individual "elasticity of demand," and relies on that to stoke a better response from you.

**By the Numbers**

## Fair Game?

**Profilers gain as more transactions become electronic.**

**$65** The cost of 1 million names from a database.

**14 billion** The number of business decisions made last year using Fair, Isaac equations.

**42%** The share of identity-theft victims reporting an unauthorized credit account opened in their name or unauthorized charges placed on existing cards.

*Sources: Fair, Isaac; Electronic Privacy Information Center; Federal Trade Commission.*

Of course, Fair, Isaac and its peers do make mistakes, though they won't admit how often their technology screws up or reveal how they arrived at your score. And those mistakes can be costly, passed along to the government and company after company. Judy C. Thomas of Klamath Falls, Ore. spent six years trying to unravel an erroneously low score reported to banks, retailers and insurers. The snafu: A credit firm had confused her with a woman who had a similar name and Social Security number.

Grudnowski shrugs off the controversy. Fair, Isaac doesn't keep the databases, he points out; other companies own and use the information. Last year the firm introduced MyFICO.com—a Web-based service that for $13 lets you read your credit score and provides up to four reasons for the rating and suggestions for improving it—partly in an attempt to appease angry consumers. Given the political debate about using scores for insurance, the company is considering a similar product to suggest how people can boos their scores to lower the costs of car an homeowner's insurance.

Fair, Isaac argues, somewhat improb ably, that it's doing consumers a favo More targeted promotions, Grudnowsk claims, will result in less junk mail, mor efficient stores and superior service. Fai Isaac is rapidly expanding application of its technology. HSBC Holdings plan to use its "decision engines" to bette predict when customers are heade toward bankruptcy. How? Via softwar that alerts the bank to transaction pat terns that suggest signs of distress—a increase in the frequency and amount c cash advances, or erratic changes i checking accounts.

Cell phone carriers have expresse interest in software that allows them t anticipate and prevent a customer fron switching service by automatically keep ing tabs on high numbers of droppe calls, equipment and reception problem and billing complaints. Grudnowsk claims the company can help medica insurers uncover fraudulent claims b singling out doctors, say, who require th bulk of their patients to receive the sam treatment or to visit every specialist i the practice.

Early next year Fair, Isaac will offe credit card companies better ways t highlight riskier members of its portfo lios before they become deadbeat Repeated cash advances and large-bal ance transfers are red flags suggestin overextended credit. The system can als tag frequent trips to the liquor store or t online gambling sites. Fair, Isaac also ha adapted its credit-scoring and risk assessment software to Liquid Credit, program that can help businesses pre qualify customers for vendor financin SBC Communications plans to use th software in handheld devices given to i sales force, allowing them to make cred decisions on the road.

One thing Fair, Isaac hasn't figured o yet is how to predict and avoid punis ment from Wall Street. While it is the cle leader in its category, it can't seem to co vince others of its potential value. I shares have traded lately at about $3 down a bracing 25% since December.

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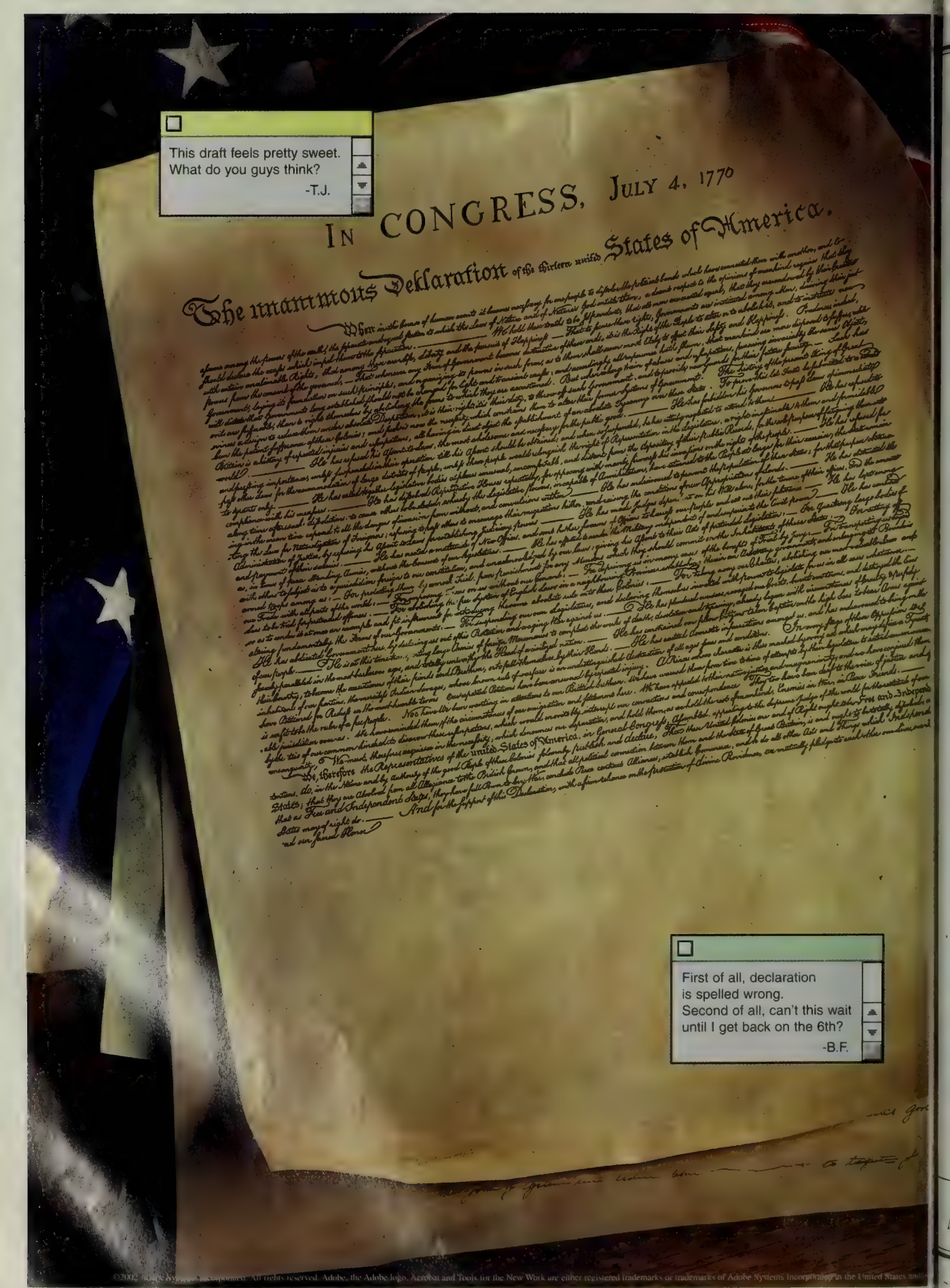


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# Flight to Quality

## Francesco Trapani sees a safe haven for Bulgari in top-of-the-line jewelry.

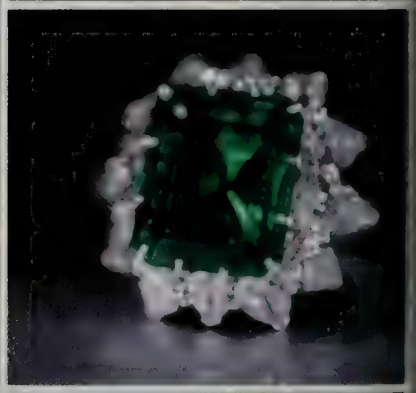
BY RICHARD HELLER

AFTER BUYING ELIZABETH Taylor a ring in the Sixties, Richard Burton remarked, "I introduced Elizabeth to beer; she introduced me to Bulgari." On Sept. 26, 40 years later, Christie's auctioned the ring in New York for $80,000, with the proceeds going to the actress' AIDS charity. It may not have been the world's best investment, but it garnered Bulgari lots of free publicity the second time around.

Such is life in the estimated $5-billion-a-year market for expensive rocks, where $684 million (2001 sales) Bulgari is a major player. Amid a downturn in demand for luxury goods, the Italian company's chief executive, Francesco Trapani, 45, has decided to reemphasize jewel priced in excess of $70,000. "I believe this market; it's what made us famou and, economic downturn or no, wealt customers are still buying high-priced lu ury jewelry," he says.

Rather like the tendency of investors buy dollars or gold bullion in times of u certainty, rich people purchase more e

Trapani and his trinkets: a pair of $38,300 earrings and necklaces starting at $[illegible],200; Liz Taylor's gift from Richard Burton; Swiss-made watches ($3,700 – $19,000).



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pensive jewelry. "They buy what lasts, what is wearable, what is classic," says James Haag, a director of Harry Winston, another glitzy jeweler, based in New York. "That's why the top end grows in time of difficulty. Better quality becomes the priority."

Last year jewelry costing $50,000 or more made up an estimated 19% of Bulgari's sales. But that slice is one of the company's most profitable, with retail markups two to three times cost, and sometimes higher. To goose sales in this category, it doesn't really pay to spend more ad dollars. So Trapani is beefing up displays in all stores and reaching out discretely, but persistently, to a smallish circle of prospects, sometimes sending his emissaries by private jet to offer exclusive showings of new pieces. By doing so, Trapani hopes to chip away at the dominance of Tiffany & Co., which has an estimated 19% share of the $50,000-plus jewelry market. Cartier, part of Richemont of Switzerland, has an estimated 11%. Bulgari is at an estimated 3.5%.

Relying more on its high end is a departure from Bulgari's ten-year strategy of becoming what Trapani calls a "diversified jeweler." Between 1884, when Greek-born Sotirio Bulgari opened his first jewelry shop in Rome, and 1992, the only diversification was in the production of high-class watches. But since then Trapani has dived into perfumes (1992), scarves and ties (1997), leather bags, belts and eyewear (1998). And he focused more on watches and less expensive jewelry.

Sales and profits boomed. Revenue rose from $76 million in 1992 to $638 million in 2000. Net margins jumped from 2.8% to 18%. Then came economic slowdown. Last year net margins dropped to 9%. In the first half of 2002 revenue dipped 5.7%; net profit, down 50%.

Thomson Financial Datastream expects a slight recovery in the second half with revenue rising 1% for the year as a whole and net declining by the same proportion. The shares, listed since 1995 in Milan and London, have plunged 61% since their high of $10 in March. By contrast, Tiffany has suffered only a 25% drop since then.

While the priciest Tiffany and Cartier pieces tend to be understated, Bulgari's designs shout—like a necklace with 84 carats of ruby and 674 carats of emerald beads, embellished with diamond-set rondelles. A gold brooch set with an ancient gold coin picturing Philip II of Macedonia has diamonds, blue topazes, amethysts, peridots and pink and red tourmalines.

There's no plan to change the bold look. Final design decisions are made either by Trapani or his uncles, Paolo (the chairman) and Nicola (vice chairman). Although the firm is publicly listed, the family still controls 55% of the stock. Trapani took the reins in 1984 at the age of 27, after his uncle Gianni, then chief executive, decided to sell his shares and leave the company after a tiff with his brothers over how the firm should be run.

Bulgari steps out from behind the jewelry case: Scents for him and her; $126 cravats.

**Bulgari's designs shout—a necklace with 84 carats of rubies and 674 carats of emeralds**

When Trapani took over, Bulgari was seen as slightly faded. Rome was no longer the glamorous dolce vita city of the 1960s, when Kirk Douglas, Audrey Hepburn and other celebrities were regular customers at Bulgari's store on the Via dei Condotti.

So, if the glitterati were no longer visiting Bulgari, Trapani would take his wares to them. He increased the number of Bulgari shops from 5 to 170 (half directly owned) in 33 countries, including a r flagship store opened in Moscow this p summer. Bulgari watches, which make 40% of revenues, are now sold throu 600 outlets. Perfume sales, 16% of r enues, are handled by 14,000 sto around the world, including Saks a Neiman Marcus in the U.S.

Perhaps wisely avoiding the temp tion to follow other luxury goods mak into fashion, Trapani has been bolder making outside investments. Two ye ago Bulgari bought 11% of Opera, a $ million closed-end private equity fu directed by Renato Preti, formerly of M gan Grenfell. Opera backs businesses t turn out Italian lifestyle products—incl ing Bruno Magli, a shoemaker; Uno Pi manufacturer of striking outdoor fur ture; Sector, a wristwatch producer; a Itama Boatyards, a luxury yacht maker.

What's in it for Bulgari? "Profits a exposure of the brand as a promoter good Italian products," says Trapa "There is a global wave of popularity Italian products, and we are part of it."

A riskier foray is a $150 million jo venture with Marriott International to ate Bulgari Hotels & Resorts. The deal signed in February 2001, and Bulgari ov 65%. The agreement calls for seven fi star hotels in cities such as Paris, Lond Miami and New York, with the possibi of a Caribbean resort. The first hotel i open in Milan next year. Marriott will m age. Bulgari will design everything from restaurant to the bellmen's uniforms.

Bulgari's share price dropped 5% in sponse to the news. Investors seemed think this was more of a stretch t scarves and perfume. Trapani is unrep tant. "Bulgari hotels are a daring mov admit, but we see both good returns the creation of a new p.r. machine," he s

It'll take a while for Bulgari to ca spell on travelers seeking glamorous, r hotels. For now, it's enough that the are reaching for very expensive baubles

*Additional reporting by Moira Forbes.*

*No. 1*

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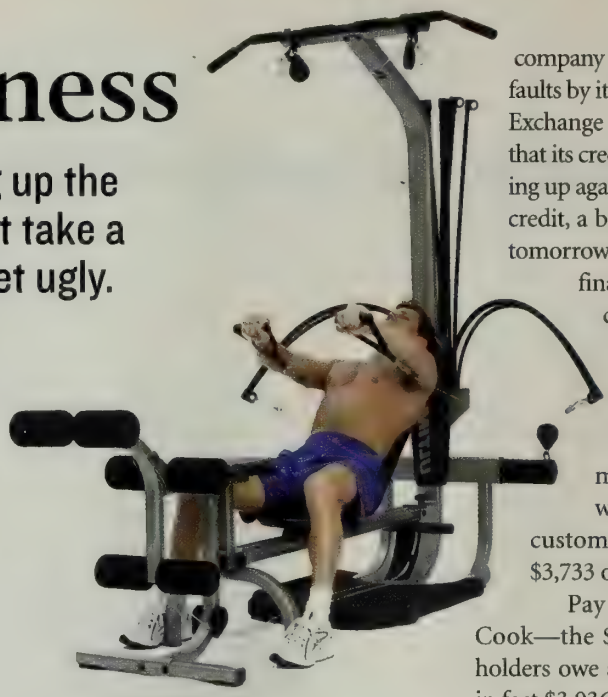
BY ELIZABETH MACDONALD

# Fiscal Fitness

## Nautilus Group is tearing up the track in sales growth. But take a closer look, and things get ugly.



WHO HASN'T SEEN THOSE TV ads with those rock-hard bodies promoting the rubbery Bowflex exercise machines? The fitness promoter is Nautilus Group of Vancouver, Wash. By its raw numbers it looks like one muscular outfit, cashing in on aging boomers battling the effects of gravity.

But despite solid third-quarter results, and a planned $30 million stock buyback, Nautilus' shares plummeted 43% to $13.65 the day after it warned Wall Street that sales could slow next year. Several investment houses, including U.S. Bancorp Piper Jaffray, one of Nautilus' investment bankers, have downgraded the stock.

Why the sudden pullback? On the face of it Nautilus seems sound. It has been on an acquisition tear, picking up the fitness-equipment unit of bicycle maker Schwinn in 2001 and StairMaster this year. All that pumped up revenue 72% to $153 million in the third quarter from the same period a year ago. Strip out StairMaster and Schwinn, and Nautilus still had a robust 40% gain (the Bowflex pulls in two-thirds of revenue). The trailing 12-month net is a hardy $95 million on revenue of $554 million.

So what's not to like? Try ballooning inventory, inaccuracies in its financial reports and an odd related-party deal involving its chief executive.

Start with all the stuff in Nautilus warehouses. Inventory as of June 30 was an eyebrow-lifting 212% higher than a year earlier, even though quarterly revenue was up only 65%. The huge growth wasn't due to the acquisitions alone. Nautilus says the stockpiling was done in anticipation of the longshoremen's strike (many of the parts for its products come from Asia). Curious then that the Piers database, an independent record of shipments based on U.S. Customs manifests, appears to show only negligible growth in Nautilus' imports. (The data include broker shipments.) "I can tell you that our inventory numbers are correct," insists Brian Cook, chief executive at Nautilus, noting that internal maritime insurance reports show imports almost doubled in the second quarter versus the year-earlier period.

But the risk for investors remains that some of the inventory buildup was unplanned—that the products aren't moving off the shelves as fast as they ought to. Another problem: The patent on the rubbery power rods Nautilus uses in Bowflex expires in April 2004, opening up the company to competition.

Now consider the Nautilus credit card, by which Household Bank is financing purchases for Nautilus' 220,000 customers. The plastic enables Nautilus to get cash up front for Bowflex machines sent to customers who would rather pay as low as $25 a month than $1,500 all at once, and makes it easier to cross-sell its mattresses and nutritional products. While Nautilus says the company is not on the hook for any faults by its cardholders, its Securitie Exchange Commission filings indi that its credit card customers are bur ing up against their maximum avail credit, a bad omen for the revenue tomorrow. According to Nautilus, s financed with the house cr card climbed to $149 mil last year from $81 mil in 2000. It reported t cardholders had "avail credit of approximately $ million outstanding." T would be $536 on average customer, down from an aver $3,733 of available credit in 2000

Pay no attention to that, s Cook—the $118 million is what ca holders owe and the available credit in fact $3,036 per cardholder. Six mo after it made the erroneous filing, N tilus has yet to correct that part of its reports. But note that in May Naut did correct the SEC reports to delete erroneous claim that Cook and Cl Financial Officer Rod W. Rice are ce fied public accountants; it turns out two executives let their CPA licenses la

What hasn't lapsed yet is a curious that Cook has with the inventor of Bowflex. The inventor gets royalty p ments based on net sales of Bowflex pr ucts. But he has to pay Cook 20% of royalties he gets from the company at $90,000. Cook got $1.3 million under agreement last year, and $939,572 in 2

Cook says he got the deal bef Nautilus went public and that it wo not compel him to artificially inf Bowflex sales. "I've never viewed it conflict because I do this job as CEO this company every day regardles anything that a royalty agreement sa he explains.

**What's not to like? Ballooning inventory, inaccurate filings and a side deal with Nautilus' CEO.**

*Additional research by David Armstro*

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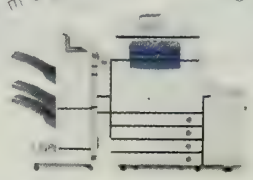

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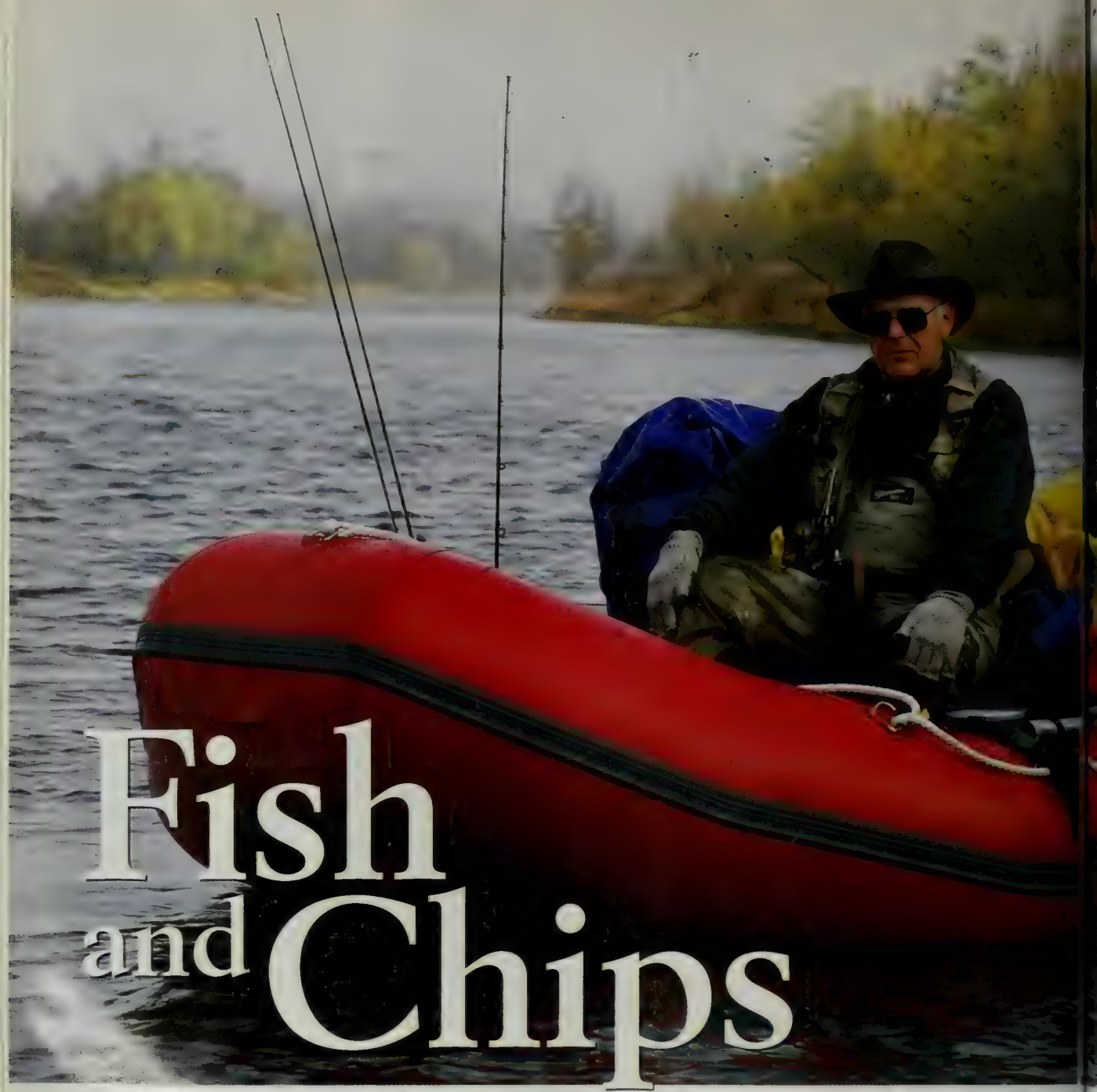


# Fish and Chips

**Intel cofounder Gordon Moore is out to preserve huge swaths of the Earth's w places. Hungry Russian bears are the least of his obstacles | By Fen Montaig**

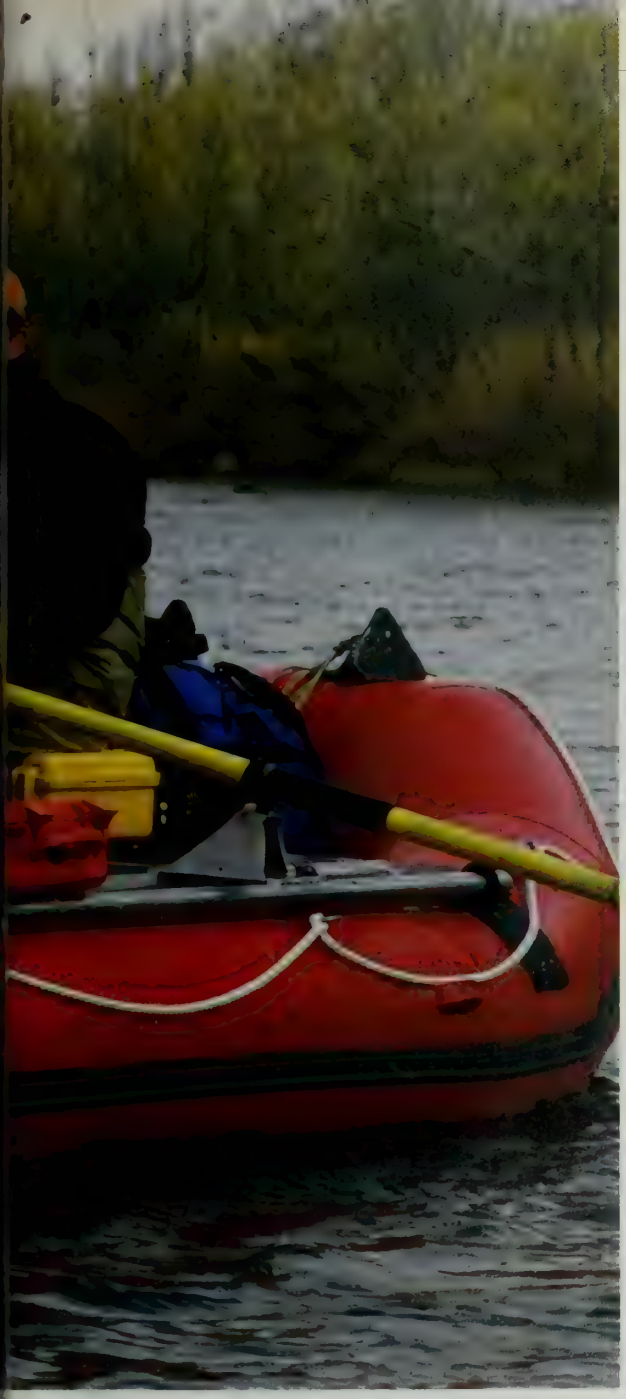
GORDON MOORE IS DEEP IN THE WILDERNESS ON Russia's Pacific coast, casting for gargantuan rainbow trout in the shadow of a 9,700-foot volcano. The 73-year-old billionaire is here for the fishing, but he has a loftier purpose in mind: to use his Intel fortune to help preserve some of the world's remaining wild places, including the lovely Zhupanova River.

At the moment, however, an emissary from the wild world—a 350-pound brown bear—is padding toward Moore. It is 150 yards upstream and closing fast.

"We've got a problem," announces Pete Soverel, a salmon conservationist who has brought Moore to the Kamchatka Pe sula and who, from the opposite bank of the Zhupanova, is to spot the beast. With visions of his generous donor becon bear chow, Soverel, a retired U.S. Navy captain, dashes to his b

"Gordon!" he yells across the 300-foot-wide river. "M downstream!"

Moore wades rapidly through the clear, jade-colored w soon joined by his angling partner, Jack Stanford, a Universit Montana ecologist, who whips out a can of pepper spray. So crosses the river in seconds, and none too soon: The bear stopped 15 yards from Moore and is sizing up the man w



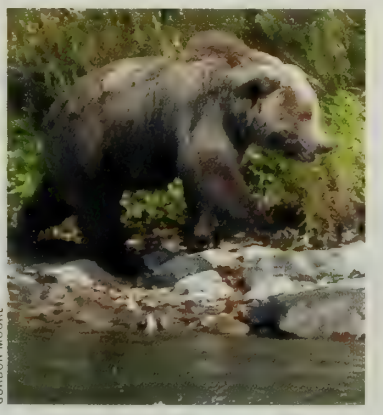
Salmon and bears, oh my: Moore and guide on the Zhupanova River. The menacing bear, above.

croprocessors and semiconductors powered the PC revolution.

"Hooo! Hooo! Hooo!" Stanford bellows at the bear as ore slips into the boat. Outnumbered now, the bear, closely ted to the grizzly, decides to go no farther. Moore quietly nks Soverel, and then, as the boat backs away, the retired Intel ef pulls out his digital camera and photographs the creature t heads downstream.

"He's just looking for fish," Moore says. "He couldn't give a nn about us."

Gordon Moore could have stayed home, counting his ney—$3.3 billion on the latest Forbes 400 list—rather



GORDON MOORE

than risking close encounters with Kamchatka bears. But this unassuming chemist has created a $5 billion foundation (as of late 2001) with an ambitious goal: to preserve huge, relatively intact ecosystems and the abundant biodiversity they harbor.

"I'd rather do a few big things that have an impact than a lot of little things," he says. "Swing for the fences."

On his to-do list are helping to protect no less than two-thirds of the Amazon River basin and portions of the Andes Mountains; rain forests and coral reefs in Melanesia; and the great arc of Pacific salmon rivers that stretches from northern California up through Canada and Alaska and down the shores of the Russian far east and Kamchatka.

Created in 2000, the Gordon and Betty Moore Foundation is the eighth-largest philanthropy in the U.S., though its assets have fallen recently. The Moore Foundation is working closely with organizations such as Conservation International, a nonprofit Washington, D.C. group that will receive up to $261 million from Moore in the next decade.

The main challenge facing the foundation and its partners is persuading foreign governments and local residents that wild lands are worth more to them in the long run if kept largely intact, rather than indiscriminately logged, mined or overfished. To that end the Moore Foundation will fund parks and protected areas and also encourage initiatives that pump income into local economies through well-controlled logging, commercial fishing and ecotourism. On Kamchatka that would mean capitalizing on the peninsula's extraordinary angling, which already lures Western fishermen on $4,000-a-week trips.

Much of the Moore Foundation's strategy is based on the thinking of renowned Harvard biologist Edward O. Wilson, who warns that the globe's animals and plants will be squeezed through a bottleneck as the earth's population, now over 6 billion, peaks at about 10 billion late in this century. After that, the population is expected to level off as people in developing countries have fewer children.

"We'll go through a period of maximum stress on the environment that will then relax a bit," Moore says as he floats in a raft down the Zhupanova in late September. "If you can get a lot of the existing organisms through that period of maximum stress, they have a good chance of lasting a long time."

Moore and two of his salmon specialists, Charles Conn and Pic Walker, have come to Kamchatka for a weeklong tour to gauge the risks and rewards of working on this remote California-size peninsula.

"This is the Christie Brinkley of salmon habitat," Walker says, noting that Kamchatka and far-eastern Russia hold a third of the

## TODAY

**Produce virtual crash dummy**

## TOMORROW

## TOYOTA

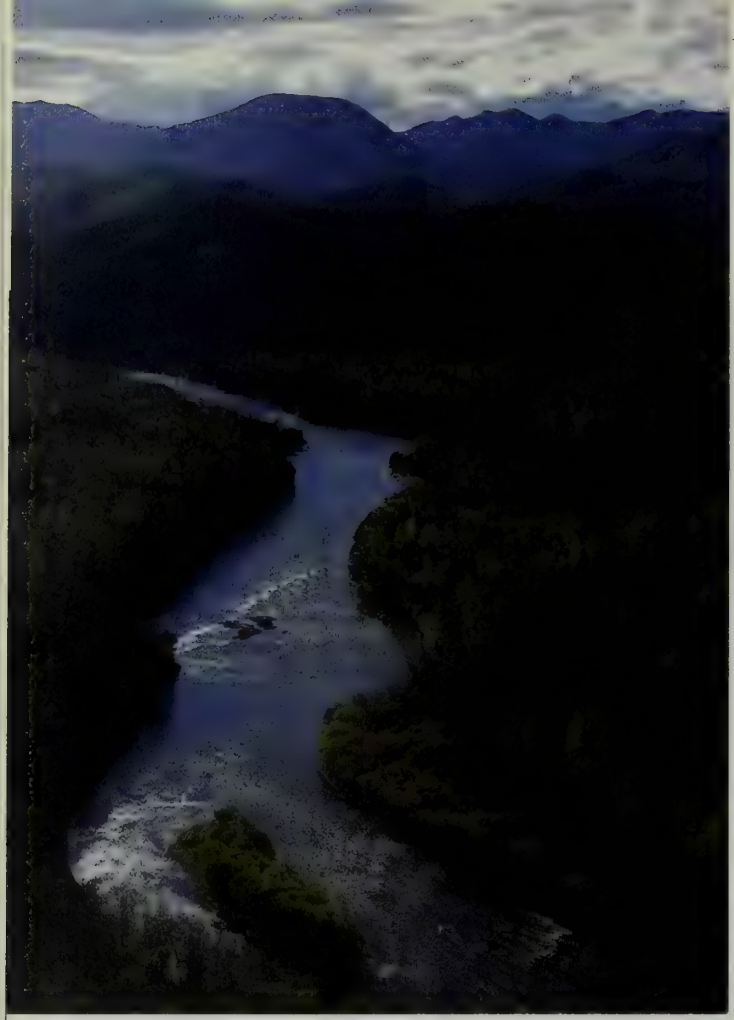
### Reduce actual crash injuries

He can't talk, he can't walk, he can't drive a car. Yet he could be the most important "person" in the world of automotive safety testing today. He's THUMS, the world's first virtual human for crash testing.

Developed by Toyota engineers, THUMS can provide a microscopic look at the injuries real people are likely to sustain in a car accident. By analyzing data from THUMS' 80,000 cyberparts, engineers can now zero in on skin, bones, ligaments and tendons — something they were never able to do before.

Although currently only an experiment, technologies like THUMS may one day be used to supplement Toyota's existing safety programs, to make our cars even safer for real human beings. Safer cars — thanks to one very smart dummy.

www.toyota.com/tomorrow



Saving it for angling ecotourism: an aerial view of the Zhupanova River.

Pacific's estimated 500 million wild salmon.

But given Russia's shaky legal system, Moore and his team must decide whether the proposed salmon refuges will, in fact, be protected by the peninsula's government. Moore is considering giving about $2 million a year to the Oregon-based Wild Salmon Center, which has been working with Russian officials to create the refuges.

Moore's expedition begins in Anchorage, where it soon becomes clear he is not your average pampered billionaire. In an Anchorage airport cafeteria at 5 a.m., he is the only one in his group to think of busing the table. Later, when a dime rolls out of Conn's pocket, Moore makes sure Conn picks it up. Forget the private jet; Moore flies to Kamchatka in a rattling TU-154 Russian airliner.

On the peninsula, a dented, exhaust-blackened MI-8 helicopter ferries Moore's group into the wilderness. The first stop is the Kol River, one of dozens on Kamchatka's west coast that teem with up to nine species of fish in the salmon family. After flying over golden birch trees and russet-colored tundra, the helicopter follows the parallel gray tracks of a gas pipeline being laid down the peninsula's southwestern coast. The accompanying road is opening up the region to caviar poachers, who eviscerate the females for their eggs, then leave the fish to rot.

The helicopter lands on the banks of the Kol next to a cluster of six white tents, part of a new biological station backed by initial grant from Moore. The group is greeted by Russian a American scientists studying the extraordinary abundance of t Kol, a small river that harbors 6 million to 9 million salmon.

"This river is a fish factory," Stanford says. The air reeks of d caying salmon, which die after spawning, and Moore travels u stream to see how recent floods have scattered countless f across the landscape, their carcasses feeding a web of mamm insects, birds and plants. Such bounty has vanished from Am ica's Pacific Northwest.

"Once salmon are destroyed, no amount of money can bri them back to the way they were—it's like trying to put Hump Dumpty together again," says Guido Rahr, president of the W Salmon Center. "Here in Kamchatka we have an opportunity to back in time. This place is to salmon as the Serengeti is to wildlif

If Moore decides to invest here, the money will be used protect the Kol, the Zhupanova and several other Kamcha rivers by creating parks and biological stations and hiring w dens to stop poaching. Activities harmful to salmon reproducti such as mining, would be restricted. Overall, the Wild Salm Center, the Kamchatka government and the United Nations ho to protect 5.5 million acres of prime, state-owned salmon w tersheds on the peninsula.

Leaving the Kol, the group flies low over t mountains that run down Kamchatka's spine a lands at a camp on the Zhupanova, a 130-m river that contains millions of salmon and hu rainbow trout. Here, Moore begins a five-day fl through an autumnal mountain landscape. his first night in camp, as the temperature heads ward freezing, Moore sits by a fire with a glass Scotch and talks about the pitfalls of philanthro

"Everybody wants money," remarks Moo who has thinning gray hair and wire-r glasses. "You have to figure out how you c make a difference."

Moore's concern for the environment gr in part, out of his love of fishing, as he saw de opment mar some of his favorite angling sp such as the Baja Peninsula. Day after day on Zhupanova he catches and releases rainbow tro some nearly 30 inches in length, hooking them an ersatz mouse called the "Verminator." Such fishing is at heart of plans to protect the river with angling ecotourism.

Before leaving, Moore's group meets on the Zhupanova w Kamchatka's acting governor and President Vladimir Putin's r resentative on the peninsula. The two Russian politicians vow support legislation protecting numerous Kamchatka rivers. Mo is impressed. Their cooperation, coupled with the producti of the peninsula's salmon rivers and the painstaking efforts of Wild Salmon Center, persuade Moore and his staff to put mo into Kamchatka. As Moore's meeting with the Russian politici ends, they ask their distinguished visitor for his autograph. scribbles a plea before boarding a helicopter and flying to final, bear-infested salmon pool: "Please save the fish."

# Why Outsourcing Is Becoming A Strategic Tool

In today's double-dip economy, companies are searching for every possible competitive advantage to help them weather the storm. Outsourcing has been one of the options they have considered when trying to determine how to survive and then thrive in the recent economic turbulence.

In the past, information technology outsourcing (ITO) typically promised savings of between 5% and 15%. Business process outsourcing (BPO) yielded savings of between 15 and 25%.

Those are not really enticing percentages. For many, the challenges that come with outsourcing were not worth the effort for such a small reward. So the Holy Grail search for competitive advantages continued.

Fortunately, new developments in BPO now allow outsourcing service providers to achieve savings of 30% and sometimes as high as 60%. At the same time, these service providers bring best practices to the process, allowing them to do it faster and better than their buyer clients. These two benefits — bigger dollar savings along with process improvement — are causing companies pressured by their competitors to take a second look at outsourcing. Today, top management views thoughtful outsourcing as a necessity for continued success.

Two trends are redefining the BPO value proposition and making out-

Illustrations by Eric Mueller

Produced and written by Jerry Bowles • Introduction by Peter Bendor-Samuel

benefit management, and 69% let an
sourcing service provider handle
health benefits management.

Transaction engines wor
most business processes. In
tion to the self-service transac
engines mentioned in the Co
ence Board study, service prov
have developed transaction eng
for finance and accounting func

sourcing more attractive. The first trend is the emergence of transaction engines, which provide the people, processes and technology to support specific business processes. BPO transaction engines allow service providers to reduce costs because they replace costly labor with technology. Additionally, service providers bring the highest quality processes to their clients. Companies like ACS, Accenture, Braxton, EDS and Exult have tested and fine-tuned their transaction engines; they are now ready to roll them out on a broad scale.

Given the current economy, it was none too soon.

"For 21st-century companies, the corporate imperative to reduce costs while providing better service is never far from view. In their search for human resources solutions to this challenge, many find that outsourcing is becoming an integral and permanent part of their human resources strategy," concludes a new Conference Board report.

The Conference Board, a nonprofit research firm based in New York City, produced a landmark study of human resources (HR) outsourcing in August. It received 125 survey responses and interviewed 40 HR executives, CFOs and CEOs of American and European companies with annual revenues over $1 billion, according to David Dell, the Conference Board's research director.

The study, whose title proclaimed "Everybody's Doing It," found the most commonly outsourced HR functions are transactional and administrative — the very processes automated by the transaction engines. For example, 80% of the respondents outsource their 401(k) programs, 70% outsource pension

## Transaction engines offer better
## dealt with Robert, but the se

like accounts payable, accounts receivable and general le
There also are transaction engines for purchasing and fo
estate management.

Transaction engines generate value for companies bec
most of their time and money is spent on the transac
aspect of the process. Service providers can reduce c
thanks to leverage since these engines work for any com
everyone hires employees, has to balance their books anc
chases goods. They also free the buyer from the constant
to reinvest in the process technology that is clearly not co
their business. Finally, they now have time for the impor
strategic part of the process.

Here's how a transaction engine works. Using HR a
example, companies move from having employees come t
office or phone a call center — where the waits could be
minable — to self-service Web sites. When new emplo
sign on, they have to fill out federal payroll forms, make b
fits choices and deal with security. The employee often h
shuttle from office to office to make all these things hap
wasting valuable time and energy. Using a transaction en
the new employee simply fills out all the requisite inform
once. Then the system distributes the information to the a
priate departments throughout the enterprise. Also, a hus

wife can log onto the Internet at 11 p.m. — when it's con-
ient for them — and determine together how to allocate
ir 401(k) investments. The transaction engine then auto-
tically alerts the benefits administration and payroll depart-
nts of the change.

addition, transaction engines offer better data integrity. Bob
Robert are the same person; in the past, payroll often dealt
h Robert but the security pass said Bob. There's no such
fusion using a transaction engine.

ayroll, benefits administration, non-executive recruiting and
urity are all interrelated. An HR transaction engine combines
nto an easy-to-use, self-service vehicle. Employees have
e information available to them when they need it, improv-
their HR experience. Employers are able to give their
oloyees better service at a much lower cost.

he new breed of BPO suppliers has leverage points that
e outsourcing more attractive. These include:

- The transaction engine that provides economies of scale
- Aggregated purchasing power
- Reengineering process expertise
- Proven technology
- A compressed time to market. Having done this before, these service providers can get the technology up and running much faster than companies can do it themselves
- Lower migration costs for the buyer since the service provider doesn't have to reinvent the wheel
- Employees with expertise who can provide more attentive service.

owever, technology needs people. And that's the second
d. Recently, American service providers have discovered
there is an untapped and underutilized pool of highly edu-
d workers outside the U.S. Nearshore labor pools in Canada
Mexico provide skilled labor working in U.S. time zones.

**rity. Bob and Robert are the same person; in the past, payroll often said Bob. There's no such confusion using a transaction engine.**

Canadian call centers are particularly attractive today because of the exchange rate between the U.S. and Canadian dollars. Offshore BPO leaders include India, Ireland, Israel, the Philippines, even Russia. But the workforce can be anywhere.

New York City's Department of Environmental Protection outsourced its ticket collection to Delaware-based Data Management; the work is done by locals in Accra, Ghana.

Offshore and nearshore outsourcing generates what I call "labor arbitrage." For example, an American software developer, on average, makes $5,250 a month. A comparably educated Indian earns $490. Well-paid workers in these countries can still yield savings of up to 80% of the cost of doing the job at home.

Currently, offshore and nearshore outsourcing is concentrated in three areas: back-office operations, customer interaction services and design services such as content development and engineering.

Of course, offshore outsourcing has greater risks and more unknowns than onshore outsourcing. But today, outsourcing service providers have enough experience with nearshore and offshore outsourcing to create workable models. They have learned how to maximize value and minimize risk to produce the great promise of substantial savings through labor substitution.

These fundamental changes in BPO move outsourcing from tactical to strategic. Combine a transaction engine with labor arbitrage, and you have a formula that can substantially improve a process's performance as well as provide remarkable savings. As outsourcing is becoming more widely understood, more companies will take advantage of these realities.

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*Peter Bendor-Samuel is CEO and founder of the Everest Group, a leading advisory service for business strategies and solutions. He is also the publisher of* Outsourcing Journal; *founder of the Outsourcing Center and author of* Turning Lead into Gold: The Demystification of Outsourcing.

## "One of the big advantages of outsourcing is the flexibility, the agility to respond to an organization's variable hiring needs."

**Cyd Kilduff, Director of Staffing, Kellogg Company**

**RES Delivers Total Outsourced Recruiting for Kellogg Company**

In 1998, Kellogg Company executives decided they could improve the way the giant cereal and convenience foods manufacturer attracted and hired employees — by building a strong vendor relationship with a recruitment specialist and outsourcing all of the company's recruiting functions. This was breakthrough thinking for that time; very few companies had yet taken such a dramatic step, and there weren't many suppliers around with demonstrated competency in providing a broad scope of outsourced recruitment services.

"We weren't looking for an add-on. We were looking to replace an entire internal recruiting function with a supplier solution," says Cyd Kilduff, director of Staffing at Kellogg Company. "We were blazing a new trail in looking for a total outsourcing solution, not just an enhancement."

The company began searching for an outsourcing partner with the resources to meet its main goals: to provide recruiting specialists with specific areas of expertise; to improve factors such as timeliness, quality, diversity, reporting capabilities and the management of fluctuations in hiring volume; to introduce technology for improvement of operating efficiency; and to reduce overall recruiting costs. While outsourcing presented an avenue to reduce head count, cost savings was not the primary issue in the decision to outsource, Kilduff says. "One of the big advantages of outsourcing is the flexibility, the agility to respond to an organization's variable hiring needs," she says. "We wanted the benefits of quality improvement with the best recruitment services possible, and we wanted to get it up and running quickly."

Kellogg Company found an ideal partner in RES — Recruitment Enhancement Services, an Omnicom Group Inc. Company. RES offered numerous advantages in developing a more holistic approach to managing the staffing function. RES now coordinates Kellogg Company's entire hiring process, from requisition to bringing new hires on board. RES implemented a customized requisition and applicant-management tracking system, hired a dedicated staff to seek out and maintain relationships with candidates as well as manage the hiring process, and set up communication with all internal hiring managers on the procedures. RES coordinated with Bernard Hodes Group, its sister company specializing in recruitment communicat and staffing solutions, to deliver recruitment marketing st gies that would drive the most talented candidates to a n developed and expanded Kellogg Company career Web and then screened applicants accordingly. RES also initiatec implemented a Web-based Internal Job Transfer progran employees and a vendor management program to manage logg Company's numerous external search firms. Finally, developed custom reporting that includes fill ratio, time-t ratio, interview-to-hire ratio and customer satisfaction.

Clearly, selecting RES as an outsourcing provider has pr successful. By October 2001, 95% of the jobs available at Ke Company were being filled by RES, versus only 10% at the of the implementation in 2000. Time-to-hire had gone fror days to just 39 days. And perhaps most impressively, cost pe was reduced by more than 60%.

Metrics are tracked through a series of reports (25 diffe reports are available online, in real time), and via regular custo satisfaction surveys conducted with hiring managers. Satisfa is measured on the process and the RES staff, the level of vice provided and the quality of candidates submitted. The r is 1 to 5, with 5 being the highest mark. Results are base each requisition, so individual recruiters are reviewed as well. runs these reports on each recruiter to see where the leve service lie with each individual. Satisfaction is high, with sc typically in the 4.25 to 4.75 range.

Kilduff says the biggest benefits of outsourcing for Kellogg ( pany have been maximizing the ability of an experienced ve to bring in new technology quickly; bringing more resources to on a variety of different issues; and having those capabilities nected to each other through the outsourcing vendor.

"Most importantly," she says, "we need agility to res quickly, effectively and nimbly to shifting needs. Every part c business must be able to respond quickly to change. RES, outsourcing partner, has truly given us the agility to address a variety of hiring needs."

**Cendian Solves Chemical Industry's Logistical Challeng**

The chemical industry presents a number of unique logi

# The "Cease Hire" is over.

# The War for Talent Returns!

If it hasn't happened to you already, it will shortly. The demographics are quite clear that there just aren't enough qualified people to fill the job openings you can anticipate between now and the next 15 years. What have you done to gear up for the challenge? Most companies have recently severely cut back, or even eliminated their recruiting function. You can start scrambling to revamp your internal resources, or you can obtain immediate access to the strategic staffing "war room" envisioned in Bruce Tulgan's book, "Winning the Talent Wars." As Tulgan, a top management advisor discovered, this "war room" already exists at Recruitment Enhancement Services.

A leader in the field of recruitment outsourcing since 1984, Forbes 500 organizations like Kellogg Company, Comerica Bank, Marathon Oil, and other companies turn to us for their staffing solutions.

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## "We give (our clients) the ROI, without the 'I' and that is very important in today's economic climate."

**Mark A. Kaiser, CEO, Cendian Corporation**

challenges. Transporting raw or hazardous materials from one place to another requires special containers and special handling, and that, in turn, translates into higher costs for manufacturers.

"Most industries don't need a vertical logistics solution — if your product comes in a standard cardboard package or on a pallet, any of the major shippers can handle it," says Mark A. Kaiser, chief executive officer of Cendian Corporation, the premier lead logistics provider focused exclusively on the chemical industry. "But, it's very difficult for any of the generic shippers to deal with chemicals and plastics. You have to worry about things like containers — whether the lining is stainless steel or glass, what are the reactive properties, what other kind of chemicals have been in that particular container — and you also have to worry about routing. You can take a truckload of tennis shoes through downtown Atlanta, but you can't take a truckload of certain kinds of chemicals through metropolitan areas. There are a lot of nuances that you don't have in other industries."

Two years ago, Cendian was formed to address the opportunity head-on by offering outsourcing solutions focused solely on the logistics needs of the chemical industry. Based in Atlanta, Cendian now employs some 250 people in worldwide operating locations, works with a network of over 300 preferred logistics service providers and has more than $1 billion in contracts currently in place. The company's ability to ship across all modes of transportation (bulk truck, dry van, marine, rail and air) into and out of more than 80 countries makes Cendian the most comprehensive logistics outsourcing resource for the chemical industry.

"The chemical industry is typically a high-volume, low-margin business, so one of the most attractive things our outsourcing model offers clients is immediate cost savings without them having to make any upfront capital investment," Kaiser says. "We give them the ROI, without the 'I' and that is very important in today's economic climate."

Cendian's service offerings provide chemical manufacturers and distributors with an outsourcing solution for the most critical logistics functions: transportation planning and execution, customer service, commercial settlement and performance management.

Beyond simple cost savings, Kaiser cites a number of additional benefits of outsourcing logistics functions to Cendian. An them are the following:

**Chemical Industry Expertise.** Cendian's professionals decades of chemical and plastics logistics experience that ar to work for clients every day. The Cendian team leverages latest developments and innovations in logistics software, su chain practices and regulatory compliance requirements to er their solutions are continuously up-to-date.

**Global Reach.** With strategically located worldwide operation ters, Cendian offers logistics support into and out of more 80 countries. By managing contracts with a select network of 300 preferred service providers, Cendian also enables effor expansion into new markets when the opportunity arises.

**The Power of Scale.** With over $1 billion of chemical logistic vices under contract, Cendian leverages its purchasing pow help clients lower their costs while maintaining superior cust service and operational excellence.

**Customer Service Improvements.** Cendian's Customer Se team utilizes real-time shipment visibility to ensure their cli shipments are where they should be when they should be ther, Cendian allows better customer focus by acting as the s source for all mission-critical logistics functions.

**Optimization of Shipments, Assets, Business Processes the Logistics Network.** A strategic partnership with Cendiar vides added visibility to critical business information. By ir menting Cendian's solution, clients are able to streamline transportation operations and greatly improve supply chair ciencies.

**Bottom-Line Impact.** Cendian delivers immediate cost sa with no capital investment.

"There is a tremendous movement toward globalization industries, especially chemicals," Kaiser says. "In add there is a general trend toward outsourcing in the che

80

GI

Global

ASIA. THE AMERICAS. EUROPE.

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For your chemical and plastics shipments, that is. As the premier lead logistics provider focused exclusively on these industries, Cendian manages shipments to the far-reaching corners of the world. With multiple operations centers, worldwide carrier relationships, and the expertise to ship in all modes, Cendian can meet any logistics challenge. Our solutions require no upfront capital investment, and deliver immediate bottom-line results. To learn how we can help your ship to come in, call 1.800.Cendian or visit www.cendian.com.

Cendian
Chemical Logistics

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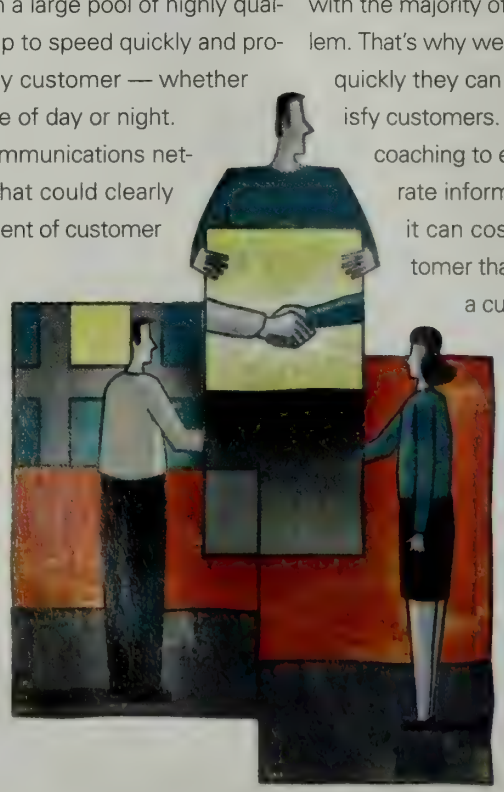
# Spherion® brought a global telecom company and a small Texas town together to provide superior customer service.

industry. At the same time, companies are reluctant to make big investments in IT infrastructure. All of these factors, we believe, support our aspiration to be the largest shipper of chemicals in the world. Ultimately, this 'power of scale' helps our clients compete in today's economy by reducing their costs, optimizing their supply chain, improving client service and avoiding costly technology development."

**Spherion® Drives 24/7 Next-Generation Call Center**

When a leading global telecom provider launched a new communications service that took off bigger and faster than expected, the expansion of customer contact operations to offer 24/7 access became an immediate priority. In addressing the need to quickly ramp up service to its rapidly expanding customer base, company management sought to leverage the opportunity by developing a universal contact center. It wanted one that could provide support for the new service as well as field overflow calls for all major sales initiatives that came in during "off hours" at a number of its other centers around the world. The challenge: find an excellent location with a large pool of highly qualified job candidates who could get up to speed quickly and provide universal service to virtually any customer — whether consumer or business — at any time of day or night.

From previous experience, the communications network giant knew of one company that could clearly meet the challenge. Bill Parker, president of customer development solutions for Spherion® Outsourcing, credits Spherion's solid understanding of the telecom industry and its strong focus on delivering positive customer experiences. "Our client knew we had a history of exceeding quality metrics through world-class customer service processes. We also excel at developing seasoned, experienced call center management with local community leadership," he says.



"To handle customers seeking information about so many different lines of business simul ously, agents would have to be highly skilled, well-trained, r faceted, bilingual and continuously motivated," says Parker. found exactly what our client needed in a small town in Texas offered not only an ideal site for the new center, but also ac to a large, highly skilled, predominantly bilingual workforce."

Situated several hours outside of Houston, the town is ne particularly well known nor geographically convenient, but it vided Spherion with the key resource that makes the center tion so well: its people. A population of 40,000, far from the b lights — and employment opportunities — of bigger cities town's workers welcomed the interesting and competitively work that Spherion offered. And Spherion, through its con ment to the community, its careful training and its quality of life, found a highly reliable source of well-qualified job applic

"Behind the message, 'Your call may be monitored for q assurance' is an integrated system that marries people, pro and technology to give customers the best possible experi Up to 70% of all customer contact takes place in the call ce with the majority of inbound calls generated by a customer lem. That's why we measure our agents' performance not on quickly they can get off the phone, but on how well the isfy customers. We provide ongoing training and perform coaching to ensure their ability to access and deliver rate information that resolves problems. We know it can cost 7 to 10 times more to acquire a new tomer than to retain a current one. Our ability to s a customer's immediate needs helps us build tomer loyalty and enhance the lifetime of every customer," says Parker.

With a record of high-quality pe mance, the Texas contact center als become a critical location for seven c ent sales programs supported by bot geted and non-targeted sales campa As a result, the center has proven its ty to field as many as half a million tomer contacts in a month.

"No matter how high the volume

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INCREASE PROFITABILITY

to add real value to your business? Spherion® Outsourcing can you how to maximize performance and optimize productivity in al business processes. For a major consumer electronics company that meant a multi-million dollar revenue increase by capturing up-selling opportunities in their customer contact center. And that's just one of the reasons 85% of the Fortune 100™ depend on us.

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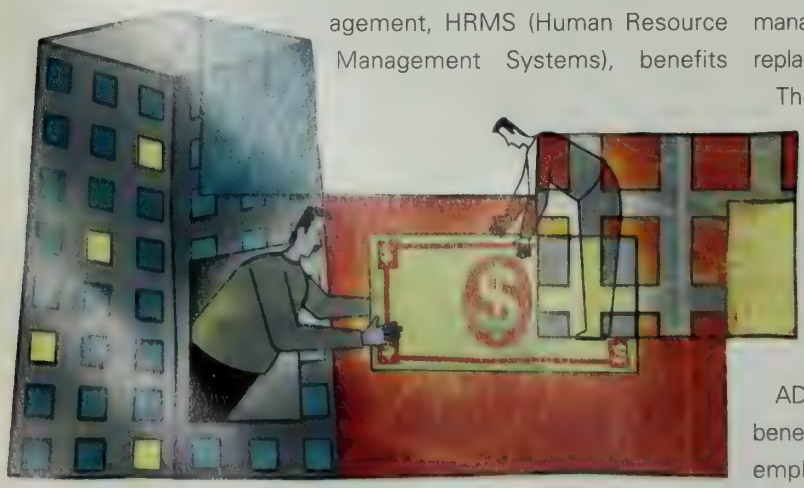
# ADP's outsourcing solutions help over 450,000 employers worldwide to staff, manage, pay and retain their employees.

agents are clearly up to the challenge," says Parker. "Not only have they helped us consistently exceed our client's high service standards, they have made it possible to repeatedly expand operations as our client's business has grown."

**ADP: How to Sustain Market Leadership**

If you want to remain a market leader in an ever-changing marketplace, you must be progressive and adaptable in seizing new growth opportunities. In the outsourcing industry, nobody has done that better than ADP, one of the largest global providers of computerized transaction processing, data communications and information services, with $7 billion in revenues. Founded more than 50 years ago as a manual payroll-preparation service in Paterson, N.J., ADP prospered and grew by processing company payrolls faster and cheaper than companies could do themselves. Nearly 20 years ago, ADP again bested the competition by expanding its services to include "beyond payroll" services including human resource administration and more recently, benefits administration.

"ADP has consistently been at the forefront of outsourcing innovations. We've benefited from capitalizing on early trends to outsource not only payroll, but a whole range of business process- s," says Brad Smith, senior vice president of marketing and new business development at ADP Employer Services, the company's largest division. Employer Services, which accounts for over $4 billion in annual revenues, provides payroll, tax regulatory management, HRMS (Human Resource Management Systems), benefits administration, time and labor management, retirement plan e vices, online recruiting, PEO (Professional Employer Organiz or services and employment screening and selection services.



ADP Employer Services comprises six distinct market seg ments and product-focused groups, including National Acc m Services (for clients with 1,000 or more employees), M jo Accounts (50 to 999 employees) and Emerging Business Ser e (under 50 employees), TotalSource (PEO), Tax and Financia vices and Benefits Services. Employer Services also serves m panies on a global basis in 26 countries worldwide.

Despite the lingering economic downturn, Smith says the us ness outlook remains favorable in all ADP Employer Ser e market segments. "The value proposition of outsourcing rem in consistent and compelling in good times and bad," he says. " most companies outsource functions that are not strategic t success of their business, and outsourcing frees them up to centrate on those things that are important."

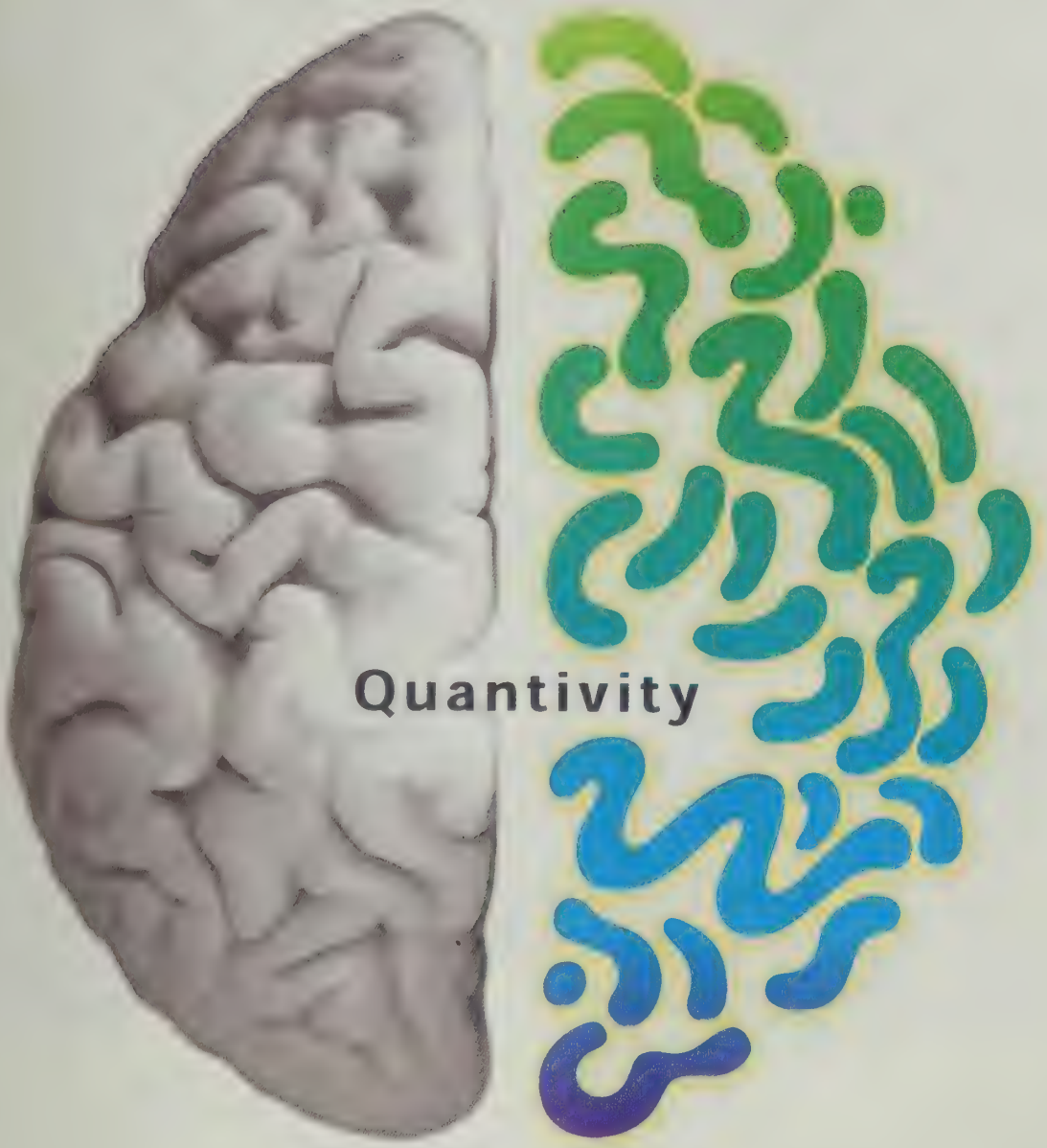
A second key reason for outsourcing is that it gives comp access to best practices, including new technologies and u date regulations. "It doesn't make a lot of sense to devote nal resources to stay current with the latest technologies an ulatory compliance demands when ADP can and does ma them much more efficiently and is truly a world-leading exp

A third benefit, Smith points out, is improved return on in ment. Outsourcing normally delivers cost savings in a vari ways. These include savings per transaction, as well as b managed opportunity costs and reduced costs of maintain replacing systems.

The fourth major benefit of outsourcing is risk redu whether it is disaster recovery, data backup or even p ties and interest associated with compliance change

For over 50 years companies have chosen to outs to ADP, through strong and weak economies. "Lookin ward, we're optimistic about the future because our rience and market intelligence reinforce that the outs ing value proposition remains very compelling," says S

ADP's traditional and Internet-based integrated HR, payr benefits administration outsourcing solutions help over 45 employers worldwide to staff, manage, pay and retain

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**Joe Melanson, Vice President, Aquent Solutions**

employees. ADP pays more than 30 million people on behalf of its clients worldwide each payday and serves over 44 million employees through one of its many employer services solutions.

"In essence, we touch the lives of one out of every six private-sector employees in the U.S.," Smith says.

While about 60% of ADP revenues come from Employer Services, ADP also provides computerized transaction services to the brokerage industry including brokerage firms, global banks, mutual funds, annuity companies, institutional investors and others through its Brokerage Services division; services for automotive retailers through Dealer Services; and claims services to insurance, auto collision repair and auto parts recycling industries through Claims Services.

**Aquent: Pioneering Creative Services Outsourcing**

There are all kinds of outsourcing services available in the marketplace today. Employee benefits administration, travel services, payroll processing, tax processing, logistics, managed IT, facilities management — almost any business function that can be considered noncore is fair game. But until Aquent came along, applying strategic business process outsourcing to creative services was unheard of.

"Many companies think of creative services as art, but in fact, it's a business process — one that provides a natural opportunity for business process outsourcing," says John Chuang, Aquent's cofounder and CEO. "It's costly to build up and support in-house creative services departments. Managing fluctuations in demand is difficult, and there is expensive equipment to buy and support. The idea of strategically outsourcing creative services was unique when we came along, but we expect it to be common practice in the future."

Aquent's outsourcing services are a natural extension of its talent agency/staffing business, founded in 1986 by Chuang and two of his Harvard University classmates. Since then, the business has grown from a dorm-room startup into a $400-million global professional services firm with 69 offices in 13 c tries, twice listed on *Inc*'s "500 Fastest Growing Private C panies in America" list. Aquent represents thousands of e rienced creative directors, designers and production artists through its consulting services division, provides techno solutions in the areas of digital asset management, brand i tity management, automated digital workflow and dynam creation.

"Our creative services outsourcing business combines the of our talent agency business — our pool of 13,000 creative fessionals worldwide — with the technology from our Mark and Branding Technologies group. This allows us to offer c the people, the process, the technology and the best prac as it applies to creative services, to deliver the classic outs ing benefits — better, faster, cheaper," says Joe Melanson president of Aquent Solutions, the company's creative outs ing division.

Aquent offers clients two levels of outsourcing services. full outsourcing partner, Aquent assumes complete respon ty for a client's creative and production services — people, nology and process management — at the client's site, offs "virtually." Or Aquent can take on the coordination, desig production of strategic campaigns developed by an ad ag "Utilizing an ad agency for production work on brochures, sig direct mail, etc., doesn't make sense. It's a very costly mo says Melanson. "We provide a scalable solution through a load-adjusted staffing model, relying on qualified talent agency and design firm experience, to deliver the same qua a fraction of the cost."

Bottom line? Aquent has a solution custom-fit for each

"Whether customers want us to take over their entire cr services function or a piece of their creative process, we'll us extensive talent and technology resources to lower their cr production costs," Melanson says. "Ultimately, our goal is t clients improve their return on creative."

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# Framed by Tradition

## Tiny William Blair still lives by small deals with middle-market clients.

## Can it survive among the giants?

BY BRANDON COPPLE

'll doing things the old-fashioned way—and still profitable: Blair's John Ettelson, Carlette McMullan, Michelle R. Seitz and E. David Coolidge III.

NSIDE CHICAGO INVESTMENT BANK William Blair, afternoons are once again as quiet as a church on Monday. Stockbrokers and research analysts calmly pad down carpeted hallways, ›king not a bit troubled by the S&P 500's ›% drop. Investment bankers lean on ›h other's doorjambs, talking quietly ›d trading stories and jokes.

It wasn't so serene two years ago. The ›m's 840 employees had watched envi›sly as their peers took lucrative buyouts from commercial banks—Robertson Stephens sold out to BankAmerica for $540 million; Dillon Read commanded a $600 million sale price from Swiss Bank. There was also dissent over Blair's hidebound middle-market conservatism, which had changed little between the reigns of the private firm's eponymous founder and its current chief executive, E. David Coolidge III.

Ian Larkin, a managing director in Blair's private equity group, remembers conference-room shouting matches over whether to raise fund limits from $400 million to $1 billion or more. That would've required Blair to invest in companies larger than the middle-market outfits—with annual sales of $25 million to $300 million—it has traditionally supported. "It was painful," says Larkin. "For a while I thought the business had passed me by."

Two years later Blair is still hidebound. It is still partner-owned, still small ($437 million in assets, $120 million in principal capital)—and still content not to compete

for multibillion-dollar deals that its bigger brethren are bound to win anyway.

But here's the difference: In the first half of this year Blair's profits rose 16% to an estimated $25 million on revenues of $150 million, as the overall industry's net income fell 28%. While Blair has maintained its 21% return on equity through the current investment-banking downturn, the returns of Lehman Brothers and Goldman Sachs have fallen to 13% and 12%, respectively.

Goldman did 51 M&A deals in the first half, 36% fewer than in the same period last year. Blair's corporate finance department, meanwhile, did 17 deals—only one less than it had done through June 30, 2001—worth $2.2 billion and generating an estimated $20 million in fee revenue.

Those results have put a stop to grousing about the decision to stay independent. Partnership capital has grown a steady 6% annually over the past five years, even as Blair's 174 principals missed out on the big windfalls of the late 1990s, when midsize banks sold for two and three times book value. Management never shopped the firm around or entertained an offer to sell out—the question never came before the firm's executive committee. Says Coolidge, 59: "Marriage just didn't look good for us."

Bachelorhood is still preferable, given the fate of Robertson Stephens, which suffered a series of collapsed tech offerings. Among them: FirePond, a "hot" software outfit whose shares are now $3 after rising to $100 from $22 the first day of trading in early 2000. With revenues down 71%, Fleet Boston, Robertson's third owner in five years, shuttered the firm this summer.

While Robertson went giddy over tech, Blair's underwritings have focused on more mundane businesses. Henry Schein is a medical products distributor from Melville, N.Y. Blair took it public in late 1995 at $16 a share, raising $99 million. Today it trades at $55 a share. Midsize deals like that don't carry much risk; that's how the boss likes it.

Blair has a long, if understated, record of zagging to others' zigs. The firm was founded to provide investment advice and raise corporate capital back in 1935, when investors and capital were as scarce as Oklahoma rain. Contrarian opportunism is still alive and well in Coolidge. He insists there's a place for a tiny independent investment bank in the world of financial-service conglomerates but admits that consolidation creates a big challenge. "It's a battle we fight every day," he says.

Coolidge stubbornly refuses to reverse the firm's historical aversion to advertising. He'd rather his bankers make headlines. In June, Blair served as lead manager on a $731 million deal, guiding J.M. Smucker's purchase of Jif peanut butter and Crisco shortening from Procter & Gamble. A client for 20 years—and managed for 11 of them by John Ettelson, Blair's current chief financial officer—Smucker's looked at all the big-name banks before choosing to stay with Blair. "Those other banks have the bigger reputations, but there is a continuity at Blair that you won't find anywhere—they've seen where we've been and they know where we want to go," says Timothy Smucker, chairman. Smucker says he likes the fact that Blair understood the jam maker didn't want to load up on debt, which would make it harder to do more deals. Blair structured a deal where P&G spun off the brands to shareholders; Smucker's then merged with the new entity, issuing new stock but no debt.

## Big Deals—And Little Ones, Too

Never heard of William Blair? You probably know some of the deals it has done.

| Blair's client/deal | Date | Value ($mil) | Form of payment |
|---|---|---|---|
| **Dairy Queen**/acquired by Berkshire Hathaway | January '98 | $585 | cash/stock |
| **Safety-Kleen**/acquired by Laidlaw | May '98 | 2,100 | cash/stock |
| **Pittway**/acquired by Honeywell | February '00 | 2,100 | cash |
| **Tootsie Roll**/acquired Andes Candies | April '00 | undisclosed | cash |
| **FTD**/acquired FTD.com | June '02 | 228 | stock |

*Source: William Blair.*

Blair has made more recent news winning the $523 million internatio small-cap portfolio of American Skan the Shelton, Conn.-based investment of Sweden's Skandia Insurance, B locked down the largest piece of busines asset management group has ever recei from one client. It should generate an mated $1.5 million annually in advis fees. The firm was in good company: Sk dia's other choice to replace Janus Ca Management, which had overseen its ternational and domestic funds, was G man Sachs.

Skandia selected Blair from initial universe of 1,025 fu culled them down to 10 by qua tative screening, then picked after exhaustive interviews. Mic Murray, chairman of Skandia's vestment committee, saw a di pline in Blair's managers tha hadn't found at any of the h profile funds. The Skandia mo will be managed by George G whose International Growth f has grown 8.5% annually in the last t years with stocks like Aventis S.A. and san Motor, easily outpacing Morgan S ley's world stock index, which declined a year over that time.

Results and rewards keep perfor in the fold. Head money manager Mic Seitz boasts that her group hasn't l money manager to a rival since 1987 firm doesn't require a noncompete ag ment. Similar story all over the b Coolidge's 33-year tenure is dwarfe Chairman Edgar Jannotta's 43 years.

Most of Blair's bankers tend t Midwesterners who've tasted life on Street and found it too fast, too merce too impersonal. "It takes a different s admits Carlette McMullan, Blair's he private investor services. McMullan c to the firm from Bear Stearns in 198 the chance to start her own broke book. She knew Blair well—her fathe been a Blair broker for 21 years whe arrived. Now she's his boss, and the one of four father-offspring pairs i brokerage group, among 53 Blair em ees with an immediate relative at the Which suggests that at one company, b runs at least as thick as money.

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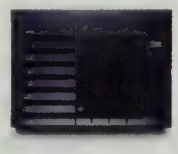

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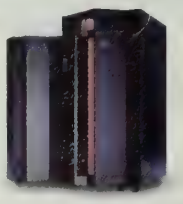

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money goes into the groun

# Bottleneck Breakers

**Efforts to wire U.S. homes with high-speed Internet access are foundering. New technology could help—if only carriers could afford to buy it.**

BY SCOTT WOOLLEY

THE MUCH-HYPED BROADBAND revolution is sputtering. Five years [illegible] able companies and local p[illegible] giants first teased consum[illegible] with dreams of fat pipes beaming the [illegible]ternet, on-demand video and hundreds of other services into the home, just 15% of U.S. households have signed up. In Canada, with lower prices and higher data speeds, usage is almost twice as high.

A big reason for the disappointment: price. The U.S. has among the highest broadband prices in the industrialized world. Even in notoriously expensive Japan, monthly bills are about $28 compared with $40 to $50 in the U.S. Two years ago Americans were using broadband at 20 times the rate of the Japanese; now Japan has pulled virtually even and soon will eclipse us.

American broadband subscriptions tripled in 2000, doubled last year and will grow 58% this year. Many in the industry worry high prices will soon bring that declining growth rate to a screeching halt. "We've done extensive surveys, and [illegible] of our users won't switch [to broadb[illegible]] if it costs them more than $30," [illegible] Garry Betty, chief executive of Earthl[illegible] which provides Internet access to 5 [illegible]lion customers; only 12% of them [illegible] high-speed service and must pay at [illegible] $40 a month. He says cheaper rate[illegible] more compelling applications are des[illegible]ately needed: "Something is going to [illegible] to give for us to see greater than a [illegible] penetration rate."

But hope looms: New technolo[illegible]

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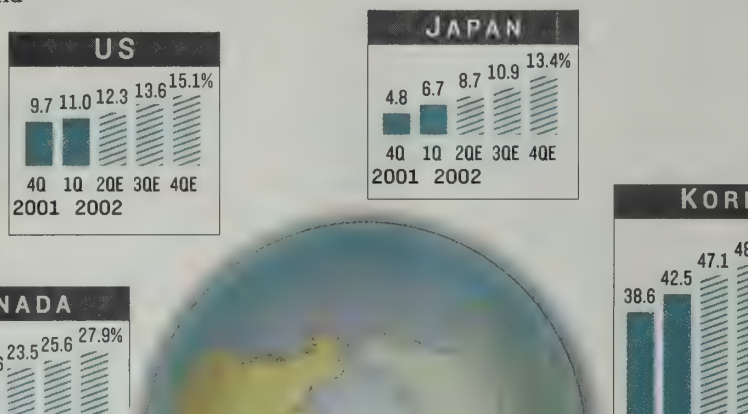
steadily lowering costs and boosting online speeds. Such advances could let people download movies straight from Hollywood studios, swap TV shows and use other sexy features that could stimulate a burst of demand. In cable, several systems now are testing cheap technology that could grant at least a tenfold increase in transmission speeds. In the phone business, which uses a broadband scheme known as DSL (digital subscriber line), the cost of new equipment has fallen by 60% to 70%, says Armando Geday, chief executive of GlobespanVirata, a major DSL chipmaker. "The average DSL speeds in three years will be four to five times faster than today, if not greater," he adds.

## High-Speed Access Stuck in the Slow Lane

**The U.S. jumped into broadband ahead of most of the rest of the world. But today subscriber rolls are climbing faster overseas, where monthly bills are lower and speeds are faster.**




[1]Percent of households. E: estimate. *Source: Credit Suisse First Boston.*

Unfortunately, these impressive strides may come at exactly the wrong time. Phone and cable companies invested heavily in first-generation broadband gear. Now, chastened by slow sign-ups, overwhelmed by debt and besieged by low stock prices, they have slashed capital spending. Total capital spending at cable operators and telcos will come in at $51 billion this year, down 45% from last year.

Smaller competitors that spent billions on early broadband rollouts, such as NorthPoint Communications and Rhythms NetConnections, are mostly out of business or too cash-strapped to upgrade. An uncertain regulatory climate adds to an unwillingness to invest. Yet for consumers to see the benefits of newer broadband technology, telecom companies first have to install it.

The lagging pace of broadband adoption has thrown the Silicon Valley set into a tizzy. High-tech executives argue that America's poky connections are the single biggest hurdle to a technology industry recovery. TechNet, a major Valley lobbying group, has made its top priority the vision of "true broadband"—100 megabits per second, compared with de facto speeds of less than 1 megabit currently—for all Americans, arguing that it would create 1.2 million jobs. (Some 437,000 jobs have been lost in tech in the past 18 months.)

Better broadband might even rescue the devastated telecom industry. Long-distance fiber networks are flooded with excess capacity. If new broadband technologies begin sopping up that glut, the industry could get back on its feet.

At current speeds, cable and telco

**"DSL speeds in three years will be four to five times faster than today, at the least.**

broadband simply ar fast enough to ca much more than her jerky video in a cre card-size window o PC screen. New gear zap data fast enough transmit a full-fledg TV-quality picture. Sc new chips can deli content at 8 megal per second; firm even claim have achieved 100-megabit le all the speed yo ever need.

DSL gear mal are hitting highs in transm sion speeds squeezing subst tially more data phone lines and senc them over longer tances. Centillium Co munications says its est chips can man 8-plus megabits per ond over distances more than a mil enough to supply vi to several TV sets in a home, plus ph calls and Web pages, all at once. It is i for dense cities, and the technology i trial deployments.

New gear is extending DSL's reac suburban and rural customers who out of range a year or two ago. Right phone companies are limited to serv customers near their central network fices. In the past year Centillium incre the range of it longest DSL service from miles to 3.9 miles. A 15% increase may sound like much, but it allows each ph site to serve 32% more customers. (I increase in range leads to a geometric larger increase in coverage area.)

And the cost of providing DSL has b plummeting—savings that ultimately

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be passed on to consumers. Three years ago Globespan supplied phone companies with DSL "line cards" that could connect a single customer to its main network. This year its cards can hook up 24 lines. It has also cut the size and power requirements for DSL equipment, dramatically lowering carriers' operating costs.

Early on DSL was plagued by consumer horror stories of incessant delays and surly service. Those flaws have largely been fixed, as companies such as BroadJump have released software to automate the installation process. At SBC Communications 95% of customers now install DSL themselves, sparing SBC from having to "roll the trucks" and send out a technician at a cost of several hundred dollars per home. Also, modem prices keep falling. The price of Covad's DSL modem dropped from $199 last year to $150 today and will ultimately fall to $100.

Some DSL sellers, which were hiking prices from $40 to $50 a month a year ago, now are heading the other way. EarthLink is testing a limited-speed DSL service in two cities, for $30 a month. Covad offers a discount that works out to $34 a month for the first year of service.

Cable systems are sprucing up, too, and could pry even greater capacity out of their fatter pipes. New gear from Westford, Mass.-based Narad Networks, which shipped its first product in September, says it can get an astounding 100 megabits per second to cable customers. Its approach uses a trick similar to DSL to increase data speeds. Cable wires carry video using relatively low frequency signals; Narad devised faster chips and smarter software that tease out a separate layer of high frequency signals traveling along the same wire. It is akin to cars speeding along an express lane elevated over a highway.

Narad says its scheme requires cable systems to rip out gear known as amplifiers and taps but adds only 4% to network costs. That is critical, especially now, says cofounder Andrew Chapman. "There's no cable company anywhere in the world that wants to rip out th infrastructure again."

U.S. and foreign cable companies offer faster connections to business c tomers first. Chapman says a few com nies have inquired about using the te nology to reach consumers, but all waiting until prices fall.

Breakthroughs also are coming "broadband wireless," which bypa old wires altogether. Hotel guests Maui and residents of small town Iowa and Montana now get broadb links over the air. Dallas-based Clearv Technologies plans to offer service major city in January, using gear fr IPWireless. Sprint is likely to follow s

"We can now deliver v cheap, very high-speed data, whether you're fixed or mobile, it d n't matter," says Chris G. Gilbert, c executive of IPWireless.

Promising, but the destructio telecom is a big obstacle. WorldC owns rights to airwaves for fixed-w less access, and in the summer it s major deal with IPWireless to s installing the technology. Six h after that press release went out, Wo Com announced it was filing for ba ruptcy protection. The rollout i indefinite hold.

**Better broadband might even rescue a comatose telecom industry and create 1.2 million jobs.**

## THE HIGH-SPEED LOWDOWN

### DSL

**LIMITS:** Pricey; can't reach many homes; too slow for video.

**BREAKTHROUGH:** Cheap new gear allows much higher speeds in cities, greater access to suburbs.

**PROGNOSIS:** Monthly bills headed below $40 as economics improve. Speeds will steadily rise.

### Cable modems

**LIMITS:** Expensive; speed fluctuates depending on how many neighbors are logged on.

**BREAKTHROUGH:** New gear can boost capacity tenfold, far faster than latest DSL technology.

**PROGNOSIS:** Superfast access likely to hit businesses first. Consumer markets several years away.

### Fixed wireless

**LIMITS:** Connections used to require expensive, ugly rooftop antennas.

**BREAKTHROUGH:** Indoor, easy-to-install antennas are now available.

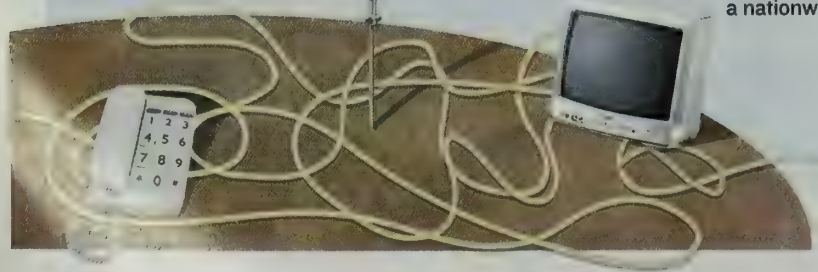
**PROGNOSIS:** Finally a viable competitor, but main players WorldCom and Sprint—tight on cash—aren't likely to fund a nationwide rollout.

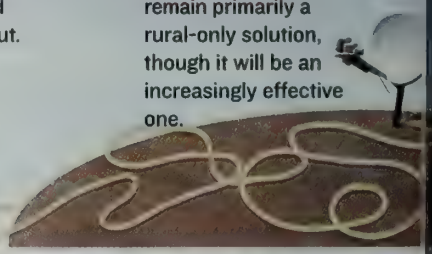
### Satellite access

**LIMITS:** Requires an outdoor dish. Upload speeds are terrible. Time lags occur as signal bounces off satellite.

**BREAKTHROUGH:** System from Broadcom out this September can send 84 megabits per second downstream, though that capacity will be shared by dozens of users.

**PROGNOSIS:** Likely to remain primarily a rural-only solution, though it will be an increasingly effective one.





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# Labor's Lingering Monopoly

## American unions continue to lose the membership wars, yet some of them retain the power to put the economy through the wringer.

**BY DAN SELIGMAN**

HERE IS A SEMISERIOUS PROPOSAL: Repeal the Clayton Antitrust Act. Why only semiserious? Because the proposal has less chance than turtles of flying. Why, then, bring it up? Because you never can tell. And besides, look at those longshoremen.

The International Longshore & Warehouse Union (ILWU) has 45,000 members, of whom 10,500 are West Coast longshoremen recently negotiating with the Pacific Maritime Association (PMA) for a new contract. Once famous mainly in connection with Harry Bridges, their flamboyantly pro-Communist leader from the Thirties through the Seventies, the longshoremen are now best known for members making about $100,000 a year. The fancy pay reflects their fantastic bargaining power, based on chokehold control over West Coast ports, through which maybe $300 billion a year of cargo comes and goes.

In this year's bargaining, management asked for new efficiencies on the dock, the ILWU resisted the demand, and when negotiations stalled, the union began massive slowdown (ostensibly driven b safety concerns) that triggered a PM lockout. This sequence of events cause an economic disaster for thousands American and East Asian shippers, an seriously threatened already-wobb national economies here and abroa Labor peace was restored, at least tem porarily, when President Bush invoke the Taft-Hartley Act to create an 80-da "cooling-off period." That gets through the Christmas season. But th

March Madness: Longtime longshore leader Harry Bridges fires up his San Francisco troops in March 1965.

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ILWU can be expected to get nasty again in January.

It is no exaggeration to say that the union, and not local government, controls the West Coast docks. Says David J. Olson, a political scientist at the University of Washington: "They see themselves as lords of the docks." Professor Olson, possibly the media's foremost quotee on the ILWU in recent months, thinks this arrangement is great. As well he might. Olson's title at Washington is Harry Bridges Chair Emeritus in Labor Studies, a detail rarely mentioned in the press.

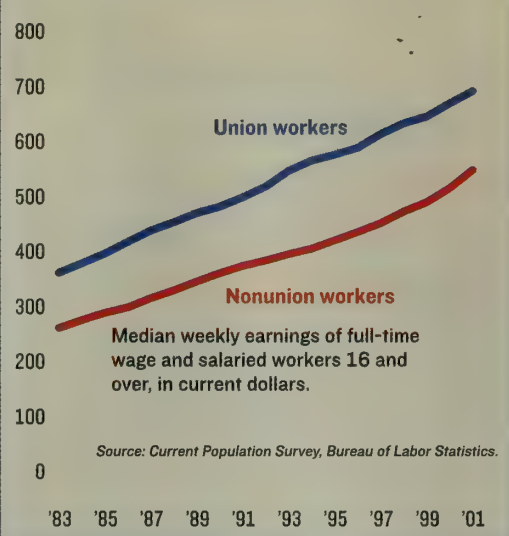
Why do we put up with such union power? For openers, because of the Clayton Antitrust Act. As its title suggests, this 1914 legislation was mainly concerned with preventing monopoly. Many of its provisions—e.g., bans on predatory price-cutting—now look to be largely irrelevant. But at the time the Clayton Act seemed a plausible effort to reinforce the Sherman Act of 1890 and ensure competitive markets. Except in one area: labor markets. In this area, incredibly, the act came down on the side of monopoly.

How could this be? The grotesque outcome testifies to organized labor's discovery of politics. The Clayton Act was the first big win in Congress for the American Federation of Labor (AFL), which had been lobbying furiously since 1908. That was the year of the famous Danbury Hatters case, in which the Sherman Act was used to get an injunction against a nationwide boycott of a nonunion hatmaker in Danbury, Conn. Samuel Gompers turned to lobbying, and the result was the Clayton Act—hailed as labor's Magna Carta—which banned any such injunctions against union strikes and boycotts.

The rationale for the new order was somewhat hilarious. The Clayton Act formally found that "the labor of a human being is not a commodity." This meant that there was no such thing as a labor market in which supply and demand governed prices. It therefore also meant that antitrust had no place in labor's realm, and the unions could not be prosecuted as "illegal combinations or conspiracies in restraint of trade."

## The Gap

Higher wages for union workers translate into lower wages for everyone else—as well as lower overall employment and output.




The observable falsity of the underlying premise presented no difficulty to Congress, where both houses passed the Clayton Act by wide margins. In the decades ever since there has been essentially no debate about labor's being a commodity, possibly because folks arguing that that is the case are guaranteed to be assailed as equating sacrosanct humanity with cattle and corn.

The basic argument against monopoly is that monopolists maximize their gains by keeping prices high and output restricted, which is great for them and bad for everyone else. The exact same dynamic is observable in labor markets, where several economists, and especially the late H. Gregg Lewis of the University of Chicago, have demonstrated that unionism means high wages for union members, lower wages for everyone else and lower overall employment and output.

In the years since 1953 the union share of the private-sector labor force has shrunk from 36% to a shade under 10%. Yet in areas where strikes are deemed ruinous or unacceptable, union monopoly power still thrives. In Ne York City today top Broadwa stagehands represented by th International Alliance of The atrical & Stage Employees ge over $1,300 a week. Unionize teachers in a Winnetka, Ill. hig school average around $75,00 for a nine-month year. In Lo Angeles apprentice electrician can make up to $29.65 an hour.

The airline unions hav recurrently featured outsiz wildly unrealistic pay increas combined with chronically po sonous labor relations. Unite today has the most generou pilot pay in history. Its Airlin Pilots Labor Association (ALPA contract tops out at $306,000 year, but the company is flirtin with bankruptcy and demandin concessions from all its unions, which a fighting with both the company and o another about how much to give bac Back in 1999, when American's pilo suspected the airline of plotting a two-ti system—with newly hired pilots in effe getting only market rates—the senio pilots launched a "sickout." This was, i effect, an undeclared strike that infuriate thousands of American's fliers.

In a recent speech to the ALPA exec tive board, union President Duan Woerth lamented the numerous bargai ing advantages that, he claimed, we enjoyed by corporate managers. But the turning optimistic, he observed that AL still had at least one advantage over t managers. "We have a fantastic leg advantage that they would die for. As union, we have antitrust immunity."

It was Woerth's proposition that t union was not taking full advantage this immunity and must now use it substantially enhance the so-called sco clauses in ALPA contracts. In plain En lish, he was proposing further restrictio on the airlines' flexibility in assigni pilots. It doubtless did not occur to hi that he was bolstering the case for rep of the Clayton Act.

**"We have a fantastic legal advantage ... antitrust immunity."**

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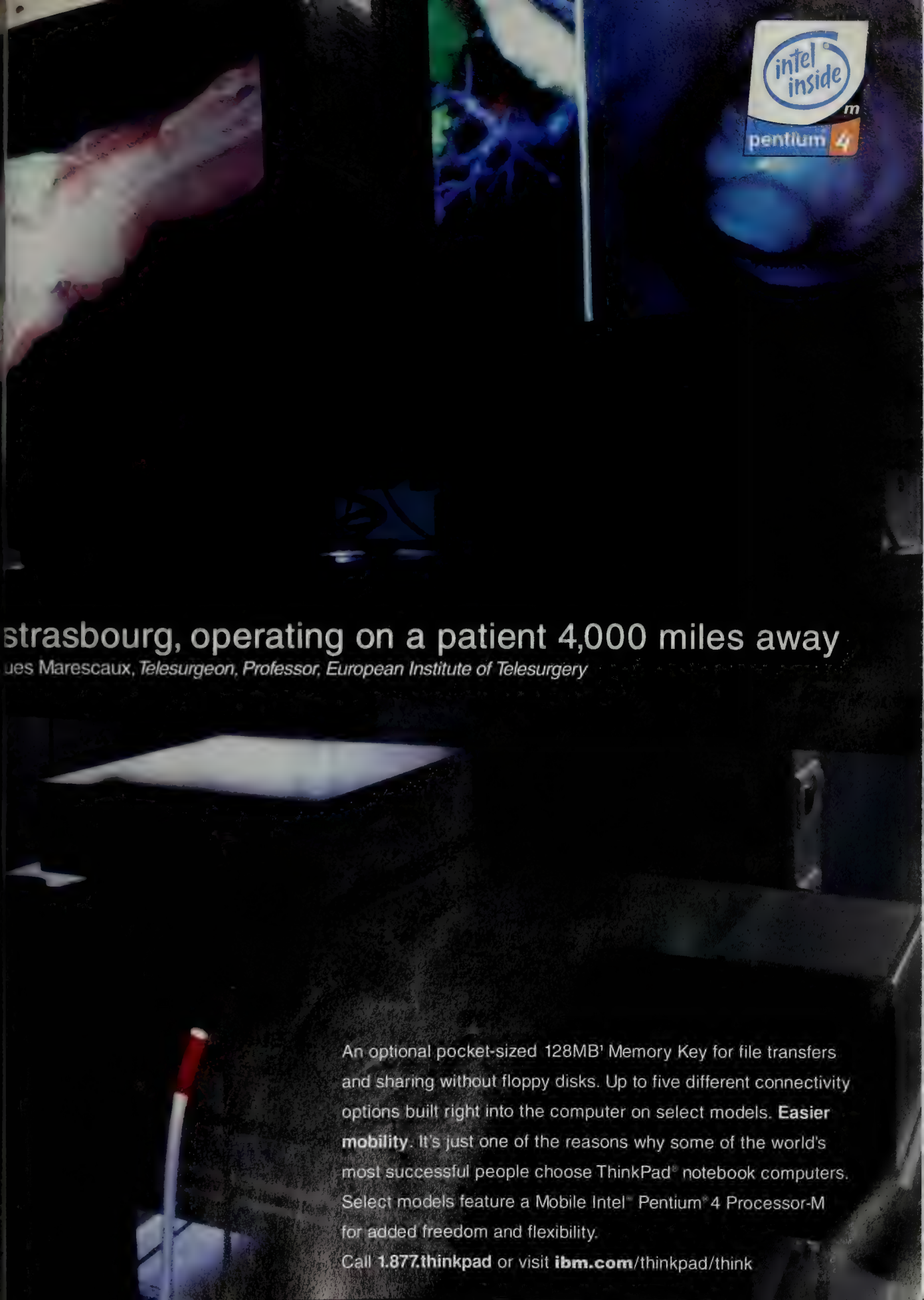
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# Conquering Cancer

## Despite a spate of setbacks in testing new cancer drugs for the broadest possible market, mysterious miracle cures are emerging in a few patients.

BY ROBERT LANGRETH

ADRIANE RIDDLE WAS YOUNG, STRONG AND HEALTHY TWO YEARS AGO, A FIERCE water polo player who attended her freshman year at San Jose State on scholarship. As the season wore on in the spring of 2001, she came down with a nasty cough and mysterious chest pains. Her doctors were as stunned as she was to learn the diagnosis: Adriane had lung cancer. She wasn't a smoker, yet at age 18 she was under attack from an often-fatal illness that usually hits people in their 60s. Surgeons removed her tumor-riddled right lung in June 2001. Several rounds of chemotherapy shrank ten tiny tumors in her brain but failed to have any effect on several more tumors in her remaining lung. Her options dwindling, she began taking Iressa, an experimental drug from AstraZeneca, in January of this year. Within a few months all of the remaining tumors had vanished.

Her doctors "were jumping up and down" when they saw the remarkable results says Adriane, who remains on the unapproved drug. This fall she returned to c[illegible] (she hopes to become a teacher), and she recently began sea kayaking a[illegible] boarding again. The only significant side effect from the drug is an acne-[illegible] her shoulders and arms. "I feel wonderful," she says. "This drug has [illegible] the chance to turn 20." Her 20th birthday came on Aug. 13.

Janese Lesser, a 40-ish mom of three schoolchildren in Manhat[illegible]ch, Calif., was diagnosed in February of 2000 with two tumors in her righ[illegible], two more in her liver and another in her brain. In the next ten months three separate chemo regimens failed to halt the cancer's voracious growth. Her husband, Richard, a lawyer who often travels on business, wondered how he would ever be able to take care of

**ADRIANE RIDDLE**
The college water polo star had lung cancer at the improbable age of 18. Iressa purged the tumors in her remaining lung. Now she feels fine.

CHRIS CORSMEIER FOR FORBES

**CHARLES H. RILEY**
"I was so close to death you can't imagine." Iressa shrank his tumors dramatically.

their three kids by himself. Then Jan entered a small clinical trial for the AstraZeneca drug, and in four weeks the tumors shrank dramatically; five months later they had virtually disappeared. She feels so well she has resumed jogging. "I am starting to feel alive again," she says.

Iressa has helped dozens and possibly hundreds of patients sidestep death—for now. On Sept. 24 Riddle and Lesser joined ten other triumphant patients to lobby for their wonder drug at a federal hearing on whether it should be approved. One patient, Charles Riley of Tarrytown, N.Y., wore a purple shirt embroidered with the words: "Cancer was killing me. Iressa saved my life."

AstraZeneca Chief Executive Sir Tom McKillop has buoyantly predicted Iressa will become a "megabrand" with more than $1 billion in annual sales. When word of its promise broke in May of 2000, Astra-Zeneca began getting 200 calls a week from cancer patients pleading for the pill; at a cost of $18 million, the company ultimately gave it to 18,000 "compassionate use" patients, including Adriane Riddle.

But in one small trial the AstraZeneca drug didn't much help 90% of the cancer patients. Worse, Iressa failed to extend the lives of patients with lung cancer in two much larger tests involving over 2,000 people. That dichotomy—startling success in a few isolated cases, utter failure in the vast majority—poses one of the toughest obstacles yet for drugmakers and regulators mired in the long and bleak struggle to cure cancer. Government and private enterprise alike will have to confront this new dilemma before the long-heralded "war on can-

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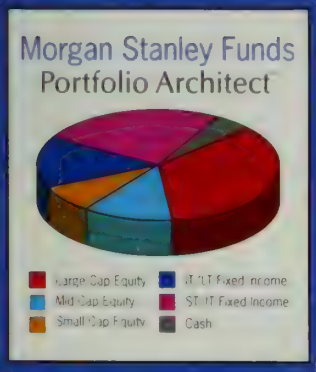


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cer"—a phrase first proffered by President Nixon in 1971—can embark on a new phase of breakthroughs.

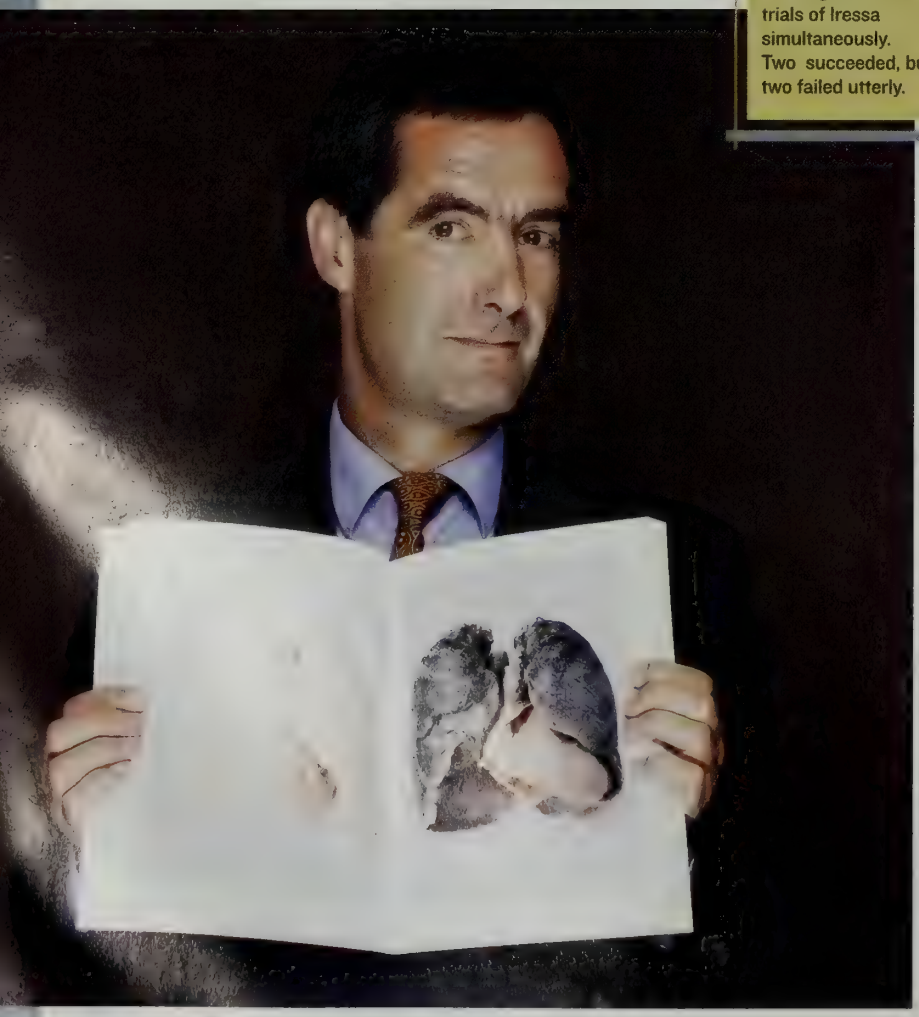
In the case of Iressa, the Food & Drug Administration must decide whether to clear a chemical compound that helps only a few patients, even though researchers don't know how to figure out which few. Furthermore, the drug has been linked to 13 deaths in Japan since its approval in late July. AstraZeneca, for its part, must decide whether to market a drug that may help only 10% of the 170,000 new patients who are diagnosed with lung cancer each year, though it has spent $300 million and a decade in search of a far broader market. Richard Pazdur, who heads the FDA's cancer-drug division, told the crowd at the hearing in late September that the agency was rolling on its "merry way" toward approving Iressa until it was "floored" to hear of the drug's failure in the two large trials. The new and disappointing data "have thrown a monkey wrench here," he said.

For decades doctors treated cancer with the blunt tools of radiation and chemotherapy, which indiscriminately kill healthy and cancerous cells alike. Thanks to the unraveling of the human genome, we are on the brink of an era of narrowly targeted, genetically geared therapies tailored to just small slices of the patient population. Someday a new style of individualized medicine will let doctors analyze the DNA in a patient's tumor, then administer customized cocktails of drugs designed to attack that tumor's particular genetic defects. Twenty years from now your doctor may no longer treat lung cancer *per se*, instead aiming at a few culprit genes that cause your specific variant.

But government and industry are ill-equipped to deal with such surgical-strike medicine. The FDA, a full four years after the first gene-targeted cancer drug hit the market, hasn't issued guidelines for what drugmakers should do to target new treatments at the smaller circle of patients who are most likely to benefit. And no drug company has yet perfected a standardized test to determine which particular genetic flaws lie behind an individual patient's cancer, a key prerequisite to targeted therapy.

Thus the war on cancer, rather than turning into a rout as some scientists had hoped only a few years ago, remains a grueling battle of attrition. So far, targeted drugs have produced dramatic advances for only a few less-common forms, including leukemia, certain stomach tumors and a subset of breast cancers. The major killers—tumors of the lung, colon, prostate and pancreas—have resisted targeted therapies *(see chart, p. 124)*. In the past two years Genentech, Pharmacia, Pfizer, AstraZeneca and Johnson & Johnson all have reported negative trial results for their drugs for tumors of the breast, colon, prostate, lung and pancreas, respectively. Merck halted development of a widely touted experimental drug after it flopped in trials for several types of tumors. ImClone Systems' application for approval of its colon cancer drug, Erbitux, was so inadequate that regulators refused to consider it.

Like Iressa, most of the new gene-targeted drugs shrank tumors in a small portion of patients in limited early tests. But when tested on larger numbers, the drugs failed to extend life beyond what was possible with standard chemo. Doctors are confident that many of the drugs now in trials will find important markets eventually. But some are scaling back short-term expectations. "Treating cancer is so hard it often feels like we are beating our heads against the wall," says Memorial Sloan-Kettering's Leonard Saltz, who led the main trial of ImClone's drug. "If the wall gives a bit, we may get overexcited. It



**BRENT VOSE**
AstraZeneca's cancer chief rolled the dice and began four clinical trials of Iressa simultaneously. Two succeeded, but two failed utterly.

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doesn't mean we've solved the problem."

The problem is particularly complex. At least 200 defective genes play a role in causing cancer, and two dozen of them are the targets of over 500 experimental drugs now in development. In any one patient probably only 5 or 6 of the 200 genes are involved, and in the next patient a different mix of genes is at work. Yet drugmakers haven't figured out how to tell which particular bad genes are the driving force in an individual patient's case.

Instead, drug firms, in their haste to develop one-size-fits-all bestsellers for the broadest market, usually test their new drugs on all patients with a particular tumor type, even though only a small fraction of them are likely to benefit. "We call it targeted therapy, but we haven't really figured out how to target it," says Diane Prager, Jan Lesser's oncologist at UCLA. Figuring out how to target the right drugs to the right patients "is the burning question" in cancer research, adds Memorial Sloan-Kettering oncologist Mark Kris.

Some scientists say drugmakers have given short shrift to research that could let them aim new drugs only at those most likely to benefit. "From an earnings point of view, drug companies want to treat as many people as possible," says University of Southern California oncologist Heinz-Josef Lenz. "I've been fighting drug companies for years. They are interested in selecting a narrower group of patients only after they have trouble getting drugs on the market."

That is what may happen in the case of Iressa, which illustrates the difficulties of testing the new gene-targeted drugs—and the tantalizing glimmers of hope they can offer. Iressa tar gets a key growth-promoting protein called epidermal growth factor, a key member of a large family of signaling proteins tha stimulate cells to grow. ImClone's Erbitux for colon cancer an the experimental drug Tarceva for lung cancer, from Genentec and OSI Pharmaceuticals, also target EGF. EGF and its corre sponding receptor (EGFR) may play a role in half of all cancer of the lung, colon, head and neck, researchers believe.

The drugs are the product of more than three decades c research into EGF, so named for an ability to stimulate th growth of skin (epidermal) cells in normal tissue. In the 1980 researchers found high levels of EGF receptors in huma tumors of the brain, lung, breast, bladder and pancreas. Th accumulating data led researchers at Zeneca Group, no AstraZeneca, to wonder whether blocking EGF receptors with drug might slow tumor growth. They hoped to design a ne type of nontoxic therapy that could halt the growth of cance rendering it a chronic disease like diabetes.

By 1998 Zeneca had a drug ready for human trials. Know then as ZD1839 and later named Iressa, it not only slowed th growth of tumors in animal tests, it actually shrank them— surprise because the drug wasn't expected to kill cancer cell Unlike most chemotherapy drugs, which have to be injecte ZD1839 was a convenient once-a-day pill. Not far behind wa OSI Pharmaceuticals's Tarceva, which worked in a simila way. ImClone's Erbitux blocked the EGF receptor in a slightl

# Trial Tally

Researchers hope new targeted therapies can help reduce cancer to a chronic disease. Despite a few clear successes, many of the new drugs have failed to extend survival. In some cases the drugs may be missing their intended molecular targets, but the bigger problem may be that scientists don't know how to pinpoint which patients are most likely to benefit.

## Successes

| DRUG | COMPANY | HOW TREATMENT WORKS |
|---|---|---|
| Gleevec | Novartis | Targets faulty Bcr-Abl gene in chronic myeloid leuke |
| Herceptin | Genentech | Blocks growth-promoting HER-2 receptor. |
| Rituxan | IDEC/Genentech | Monoclonal antibody used to treat non-Hodgkin's ly |
| Iressa | AstraZeneca | Oral drug targets epidermal growth factor receptor. |

## Setbacks

| DRUG | COMPANY | HOW TREATMENT WORKS |
|---|---|---|
| Iressa | AstraZeneca | Blocks EGFR, a key growth-promoting protein. |
| Erbitux | ImClone Systems | Injectable monoclonal antibody works against EGFR |
| Avastin | Genentech | Monoclonal antibody hits vascular endothelial grow |
| L-779,123 | Merck | Targets growth-promoting protein called Ras. |
| Zarnestra | Johnson & Johnson | Targets mutant Ras protein. |
| SU-5416 | Pharmacia | Drug blocks VEGF receptor; starves tumor of blood |
| prinomastat | Pfizer | Blocks matrix metalloprotease, a key enzyme in tum |

fferent way, using an injectable monoclonal antibody.

Zeneca's approach got a boost in late 1998 with the pproval of Herceptin, a Genentech drug for advanced breast ncer. Herceptin is a monoclonal antibody aimed at HER-2, a ceptor that is a close cousin of EGFR; the drug boosts survival five months in patients with a particularly virulent form of east cancer. EGFR blockers like Iressa had far broader potential an Herceptin, since EGFR is abundant in many tumor types.

But Genentech had avoided aiming Herceptin at all patients ith breast cancer, instead picking out only a small subset: the 25% patients whose tumors contained ultrahigh levels of HER-2. It ved that inspiration to a dogged UCLA researcher named Dennis amon *(see box, p. 126)*. Had the company instead tested Herptin on a broad range of patients, its trials likely would have failed cause most breast tumors aren't driven by HER-2.

AstraZeneca and rivals on the EGF front lacked this kind of tailed patient-targeting data. So AstraZeneca followed the me-tested approach for cancer drugs: It had initially tested essa on terminally ill patients with various cancer types, hopg for hints as to which tumors might be most vulnerable. In e early trial on 64 cancer patients, 16 had advanced lung ncer—and tumors shriveled dramatically in 4 of them. In nother early trial, tumors shrank in 3 of 50 lung patients.

That thrilled lung specialists because metastatic lung cancer rely responds to any drug. One type of chemotherapy works out 6% of the time in late-stage lung cancer. Some 60% of all ng cancer patients die within a year of diagnosis, and 85% die within five years. One clinical trial investigator mailed in "before" and "after" X rays of a patient whose tumor vanished after being treated with Iressa, exclaiming that he had never seen this before. Besides an acne-like rash and diarrhea, there were relatively few side effects—another thrilling find for doctors and patients alike, given the devastating side effects of chemo (hair loss, severe nausea, damage to the immune system).

The next step, typically, would have been to do a second-stage test (of three required phases) on a few hundred patients to confirm early results, proceeding later with costlier and bigger final-stage trials in thousands of people. Sensing a breakthrough, AstraZeneca gambled in 2000 and began both kinds of trials at once. "Our view was that it was such a devastating disease, let's get as many things going as possible," recalls Brent Vose, head of oncology at AstraZeneca. "We were trying to feel our way to how to use the new therapy."

One pair of tests was small (209 patients in Europe and Japan; 216 in the U.S.) and aimed at showing only that Iressa could reduce tumor size in advanced cases that had failed to respond to chemo. A second pair of trials was much larger (1,093 patients in Europe and Asia; 1,037 in the U.S.) and was intended to prove that Iressa could extend the lives of patients when combined with common chemo.

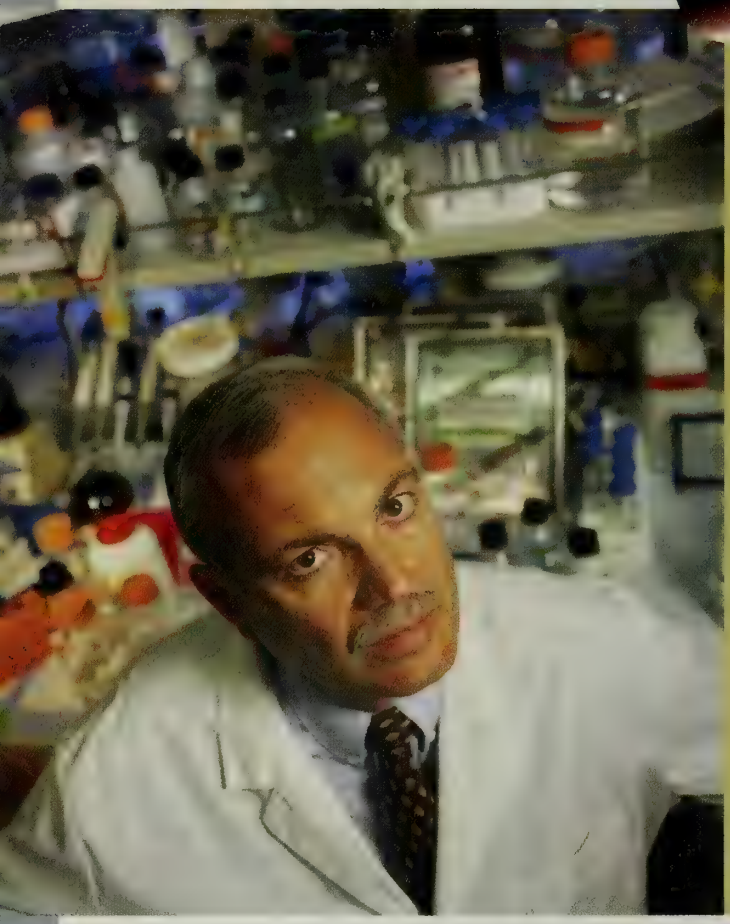
The trials quickly filled up as excitement grew over the new therapy. By mid-2000 the demand for Iressa had intensified so much that thousands of patients, unrelated to any trial, were pleading for the drug. The company set up a 20-person team

**ESULTS**

- duces partial remission in 93% of early-stage leukemia patients and 38% of patients with stomach-lining tumors.
- xtends survival at least five months in patients with the overabundant HER-2 gene.
- hrinks tumors in up to 57% of patients; remissions last about a year.
- September FDA advisers recommend approval as last-ditch treatment for lung cancer based on 10% response rate.

**ESULTS**

- wo giant trials find it does not improve survival as initial treatment for lung cancer when combined with chemo.
- egulators refuse to consider application for approval in colon cancer last December, citing flawed studies.
- ntiangiogenesis drug shrinks tumors but fails to extend lives of breast cancer patients; tests ongoing in other tumors.
- lerck stops development of ballyhooed drug after it fails to shrink tumors in several trials of various types of cancer.
- ailed to improve survival in tests on colon and pancreatic cancer; testing continuing for other tumor types.
- olon cancer drug looks promising in early tests, but large-scale tests find drug doesn't improve survival.
- rug ineffective in large-scale studies in advanced prostate and lung cancer.



## Targeting Tumors

**UCLA's Jonsson Cancer Center oncologist Dennis Slamon thinks he knows why Iressa flopped in two large trials: lack of targeting.**

Slamon was the force behind the first in a new generation of targeted cancer therapies: Herceptin, for advanced breast cancer. Yet even his drug might have failed had it been tested as most drugs are—on the broadest possible range of patients, rather than on just those most likely to benefit.

Slamon studied tumors from cancer patients in a search for clues to key cancer-causing genes and proteins. In the late 1980s he found that 25% to 30% of breast tumors, including some of the worst cases, had ultrahigh levels of a gene called HER-2 and its protein. This was controversial at first, but Slamon persuaded Genentech to test a monoclonal antibody that would block this protein. Because of his work, Genentech knew to give the drug only to those patients with elevated HER-2, a much more specific target. It extended the typical patient's life by five months more than chemo alone, one of the biggest advances in decades of treating breast cancer.

Herceptin debuted in 1998. Now Slamon pushes a new diagnostic test to spot the HER-2 gene. Approved in August, it boosts the response rate to the drug from 45% to 54%. He also is testing a new cocktail that mixes Herceptin with carboplatin, a chemo drug for ovarian cancer, and a third drug, taxotere. In initial studies, the combo delayed breast cancer's spread for 17 months versus 7 months with the standard regimen of Herceptin and Taxol. Large trials are under way. —*R.L.*

to evaluate "compassionate use" requests from patients who faced imminent death. One of the patients who qualified was Karl Domeny, a retired tool-and-die maker in Chicago. A 77-year-old former smoker, he was diagnosed with lung cancer in June 2001, and three types of chemotherapy subsequently failed. By November he was choking on lung fluid and couldn't breathe without supplemental oxygen. His wife had a priest visit their home to administer last rites.

A month later, in a last-ditch attempt to halt the cancer's spread, oncologist Philip Bonomi of Rush-Presbyterian-St. Luke's Medical Center in Chicago put Domeny on Iressa. The next morning, after taking just two pills, Domeny stopped coughing for the first time in months. Soon he needed less oxygen. A few weeks later Dr. Bonomi ordered an X ray of Domeny's chest and was flabbergasted by what he saw. The enormous white mass invading the left lung was much smaller, and within a month it was gone. In 25 years of treating lung cancer he had never seen anything like it. Almost a year later Domeny remains in full remission. He tends his vegetable garden, spends quality time with his wife and visits relatives. "Without a doubt," he says, "I would already be six feet under without this pill."

Many patients sent letters thanking AstraZeneca for keeping them alive. Jan Lesser and her husband flew to London to personally thank Chief Executive McKillop. One mother with lung cancer mailed in a videotape of her daughter's wedding, the date of which had been moved up because of the illness. Thanks to Iressa, the mother wrote, she made the wedding and felt well enough to dance at the reception.

By late 2001 results were in from the two smaller trials. In the Japan/Europe trial, Iressa shrank tumors in 19% of patients (39 of 209 total). In the U.S. trial, involving sicker patients, tumors shrank in 10% of patients (22 of 216); remission lasted six or seven months.

But neither small trial measured whether patients actually lived longer. Based on these studies alone, AstraZeneca asked the FDA for accelerated approval of Iressa on Dec. 28, 2001. Company researchers hoped to gain approval to treat late-stage patients who weren't helped by current chemotherapy. They were confident they could later win a far broader claim for initial treatment for lung cancer cases—critical for the drug's commercial prospects—once the results came in from Iressa's two large, 1,000-patient trials.

The same day AstraZeneca filed, the FDA stunned Wall Street by refusing to consider ImClone's application for Erbitux because it deemed the trial data insufficient. It was the first warning sign that the anti-EGF class might not live up to enormous expectations. (The day before, tastemaker Martha Stewart sold 4,000 Imclone shares, setting up the insider-trading scandal that threatens to destroy her business empire.)

To AstraZeneca scientists, ImClone's problems seemed simply a question of poor trial design. They and lung cancer specialists were all but certain the verdict from the pair of

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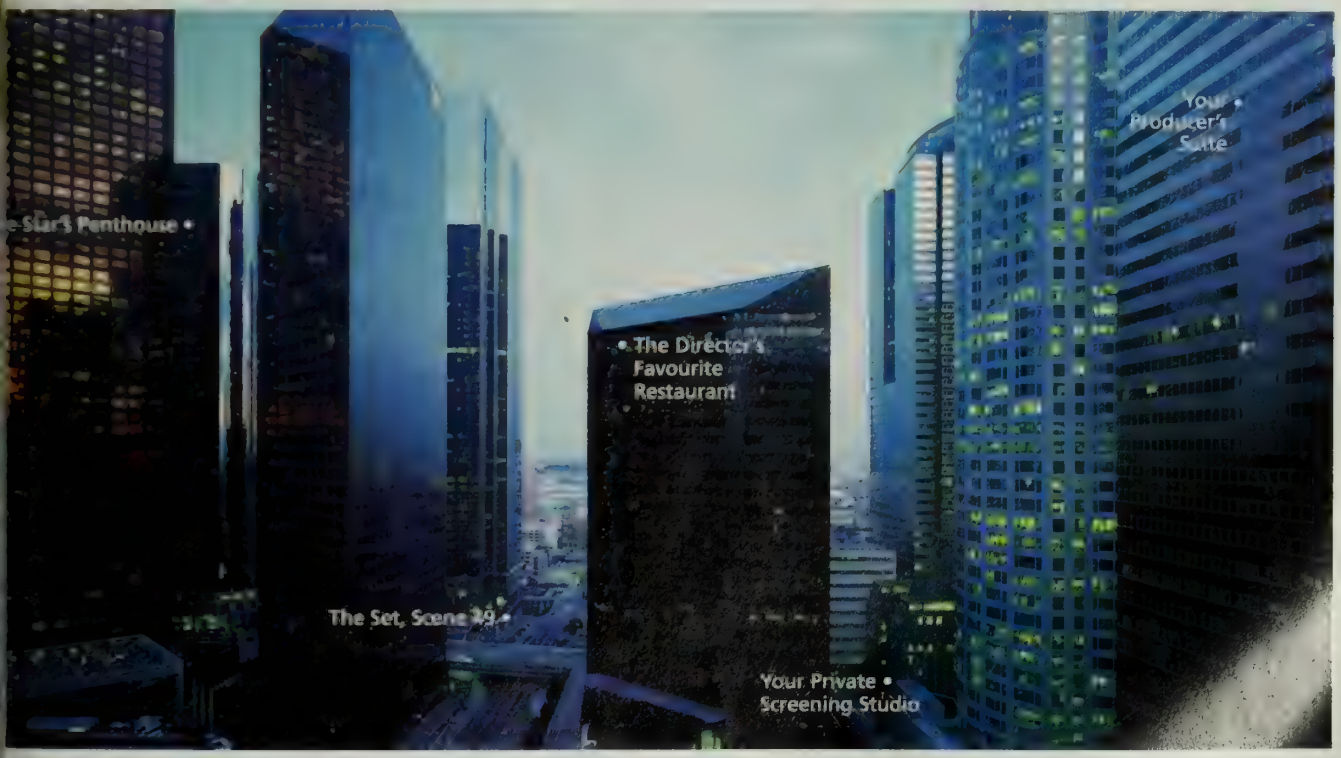


en you fly First Class or Golden Club Class with us from New York or Los Angeles, we'll have a chauffeur driven sedan [illegible] you up when leave. And waiting for you when you return. This service extends to any point within a 40 mile radius of the airport. It's [illegible] way of ensuring have a smoother, faster, more comfortable flight. Even before you get on the flight. **Malaysia Airlines. Going beyond expectations.**

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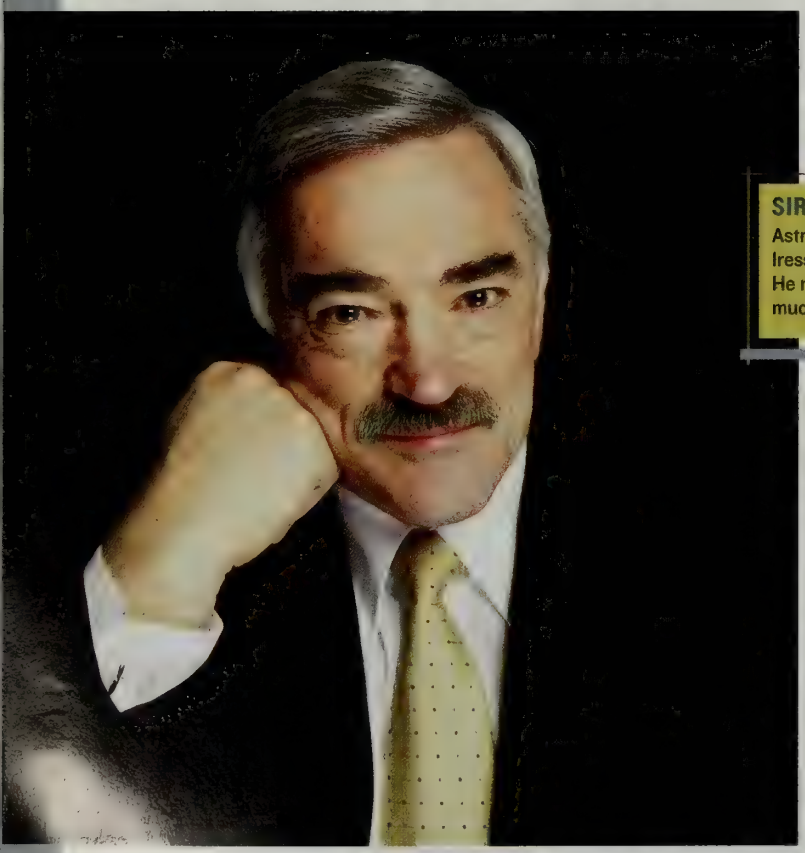
large trials would be good. It wasn't. Dr. Vose, AstraZeneca's oncology chief, first heard the results when a company statistician called him at a sales meeting in Los Angeles. The results were unambiguous, the statistician intoned without emotion: Iressa didn't boost survival in either big trial. Stunned, Vose broke the bitter news to the company's chief executive, McKillop, who cursed in disbelief. AstraZeneca share price fell 16% when it announced the news early on Aug. 19 of this year. Patients and their doctors were just as shocked. "It's depressing," says Kenneth O'Byrne of the Leicester Royal Infirmary in England. "We all thought this trial would work."



**SIR TOM MCKILLOP**
AstraZeneca CEO saw Iressa as a blockbuster. He may end up with a much smaller market.

The distressing results clouded the prospects for the Sept. 24 FDA hearing on Iressa, even though the proceeding was to be based only on the better results in the two earlier and much smaller trials. Thanks to its compassionate-use program, though, AstraZeneca had extra help. The National Organization for Rare Disorders, a nonprofit that had run the program for the company in the U.S., sent letters to all 13,000 participants notifying them of the chance to speak at the hearing. Thus did Lesser, Adriane Riddle and other patients appear.

At the hearing AstraZeneca researchers were at a loss to explain why the two big trials had failed; they suggested the chemo must have canceled out Iressa's beneficial effects. They also argued that Iressa could actually help up to 50% of patients because it can reduce coughing and other symptoms, or slow tumors' growth, even when it doesn't extend life. Moreover, the company argues that given Iressa's mild side effects, why not give it to all lung cancer patients in search of the one-tenth who will do well on it?

That would produce nice profits—and mediocre medicine. Patients who take a drug to no effect waste precious time that might better be spent trying other therapies; and giving an expensive new drug to thousands of people who won't benefit will further inflate health care costs. "We literally cannot afford to do this anymore," says Howard McLeod, a pharmacologist at Washington University in St. Louis, who studies how tumor genetics influence chemo response. "If we have an expensive drug and 90% of it is wasted, the cost to society is high," he says. "Technology is too advanced for us to accept nonspecific cancer drugs that are used on everyone and benefit only a few. It will slow down progress."

Ultimately, the 14-member advisory panel of oncologists agreed with the FDA that AstraZeneca hadn't proved that Iressa reduces symptoms. But they set aside the failed results from the two big survival trials and voted 11 to 3 to recommend approval, albeit only for patients who had failed other therapies. The FDA could clear Iressa any day.

Meanwhile researchers around the world are trying to answer a simple question: Why did Iressa fail so dismally in the two big trials? One problem: Targeting any one defective gene isn't enough. Every tumor has five to ten flawed genes driving its growth, and researchers may have to target several simultaneously with cocktails of drugs, the approach that worked against AIDS. But finding such cocktails will be slow and difficult because regulators frown on testing two experimental drugs together, and corporate rivals rarely share drugs.

Some rivals argue AstraZeneca should have done a better job narrowing the field of trial patients by first testing tumors for EGFR levels and admitting only those with elevated levels of the protein. "It's the obvious thing to do," says one rival researcher. "They cut corners." AstraZeneca denies it and says some patients respond even though they don't have high EGFR levels, making broad testing a logical alternative. The company has collected tumor samples from about 40% of the patients in its trials and is now analyzing them to search for a set of genetic parameters that predict which patients best respond to the drug. It hopes to have preliminary results in months.

Other researchers, including those at Memorial Sloan-Kettering and, separately, Dr. Bonomi at Rush Presbyterian are performing their own studies. Some researchers call for a massive new effort to analyze thousands of various tumors to glean a better understanding of their genetic variations. Until then, new cancer therapies will produce startling instances of recovery—and drugmakers' broad market trials may continue to fail. F

Every time someone
comes to your door,
a decision is made.
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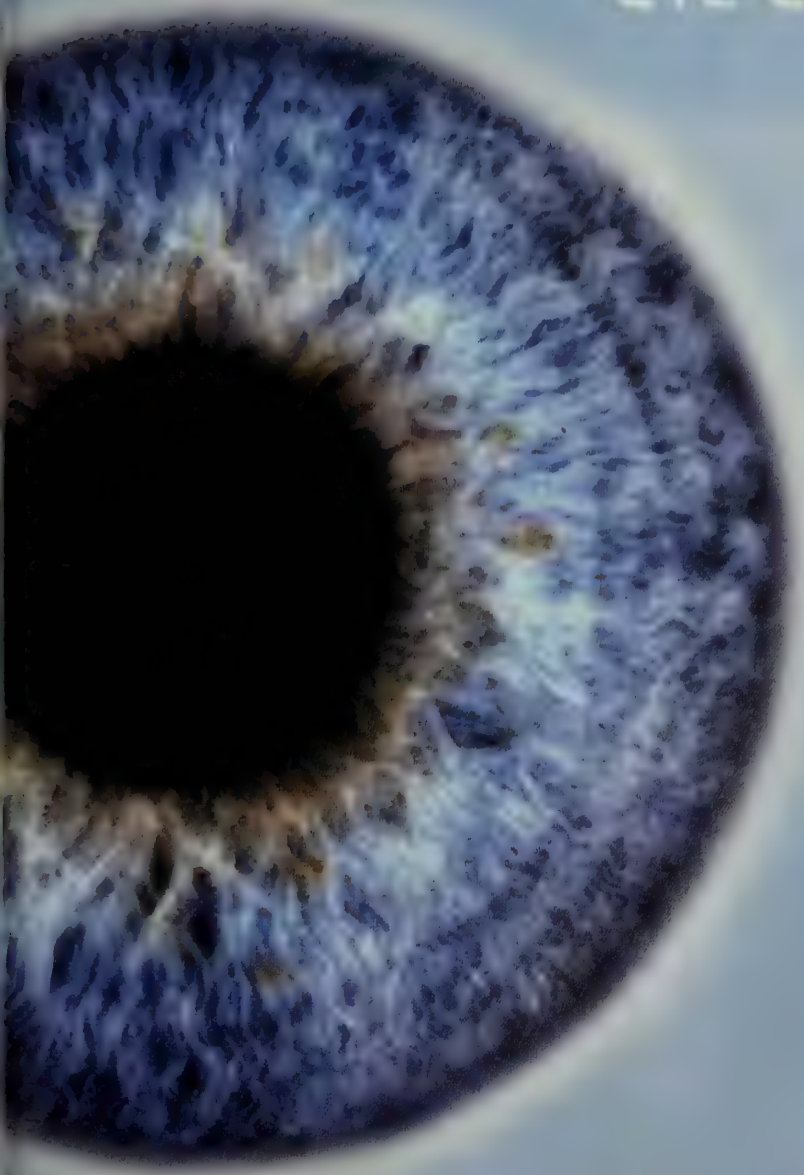
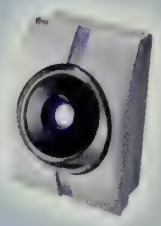
# THERE'S A REASON
# ARS, THIEVES AND SPIES NEVER MAKE EYE CONTACT.





LG

# Double Dutch No Longer

## Amid a media recession, Crispin Davis is coining money at Reed Elsevier. How did he pull that off? By Richard C. Morais

IF YOU ARE NOT A SCIENTIST OR A LAWYER, YOU MIGHT NEVER GUESS WHICH OUTFIT IS ONE OF THE WORLD'S biggest companies in online revenue. Ebay will haul in only $1 billion this year. Amazon's got $3.5 billion in revenues but is still famously losing money. Outperforming them both is the London-based publishing firm called Reed Elsevier. Of its $8 billion in likely sales this year, $1.5 billion will come from online delivery of data, and its operating margin on the Internet is a fabulous 22%.

Reed's success is freakish in another way: It's a media stock doing well. Shares of AOL, Disney and Vivendi have collapsed during the last three years, but at Reed they're up 9%. Its $18 billion market capitalization places it above Vivendi and Pearson as Europe's largest public media company (but unlikely to bid for troubled Reuters). Worldwide, it's fifth. The company, predicts Merrill Lynch, is on track to boost earnings 10% this year, to $1.1 billion (before goodwill and amortization), or $1.75 per ADR.

Credit this accomplishment to two things. One is that Reed is primarily selling not advertising or entertainment but the dry data used by lawyers, doctors, nurses, scientists and teachers. The other is its newfound marketing hustle: Its chief executive since 1999 is Crispin Davis, formerly a soap salesman.

But Davis will have to keep hustling to stay out of trouble. Reed Elsevier has fat margins and high prices in a business based on information—a commodity that is cheaper than ever in the Internet era. New technologies and increasingly universal access to free information make the company vulnerable to attack from below. Today pirated music downloaded from the Web ravages corporate profits in the music industry. Tomorrow it could be the publishing industry's turn.

Some customers accuse Reed Elsevier of price gouging. Skadden, Arps, Slate, Meagher & Flom patent lawyer Daniel DeVito is a fan of Reed's legal-search service, but does free science searches on the Google site—before paying for something like Reed's ScienceDirect—and often finds what he's looking for at no cost. Reed can ill afford a rest.

JILLIAN EDELSTEIN FOR FORBES

Just a couple of years ago Reed Elsevier was being held up as a classic failure. The publisher was created in 1992 when Britain's Reed, a trade book and magazine publisher, merged with the Netherlands' Elsevier, a science publisher. It was a muddle from day one: London-listed Reed Elsevier Plc owns 50% of the operating company, Reed Elsevier Group, and 5.8% of the separately Amsterdam-listed Reed Elsevier NV, which in turn also owns the other 50% of the operating company. The new company set up two different management boards, one each in London and Amsterdam, with both local bosses exercising veto power over the other.

"There were two sets of people who didn't want to give up their power base," says Morris Tabaksblat, then an outside director and Unilever's executive chairman. "It was unworkable. They were screaming at each other. People were offensive. Abusive."

While brass clashed, basic business suffered. In 1997 the company had to write off $740 million compensating advertisers for a travel publishing unit (since sold) that had inflated its circulation figures. In 1999 Tabaksblat agreed to become Reed Elsevier's chairman, and he forced through a new management structure and brought in Davis, a 53-year-old Englishman, as the company's sole chief executive. An unlikely choice. Davis had previously worked for Procter & Gamble, mostly in Cincinnati, before messing up at Guinness Plc. and then resurrecting his reputation at Aegis, a midsize European buyer of ad space.

Davis, pleasant and reserved in person, but intensely competitive in business, is the son of a middle-class lawyer. Maybe sibling rivalry has something to do with his drive; his brothers are a judge, a City lawyer and a McKinsey & Co. boss. "I can think of some families where there are one or two stars," says David Webster, chairman of British supermarket Safeway and a past director at Reed, "but for all four brothers to be stars is quite unusual. When I interviewed him, [it was clear] he was ve keen to be a chief executive of a Footsie [FTSE 100] company."

Davis discovered that beneath Reed Elsevier's warring sen management stood high-quality publishing assets—what th needed was more urgency on the marketing side. Davis imm diately replaced 11 of the top 12 senior executives at the varic headquarters, reduced head-office personnel by 40%, and int viewed 110 managers across the company. He then issued a si ple edict: Each unit had to create "demonstrably superior prc ucts" that could achieve "above-market growth rates."

"This is not a strategy story," says the button-down Davis his London office. "It's about execution."

In New York, at the 20 media magazines that include *Varie* unit president Tad S. Smith cut head count 16%, saved printi costs by slightly trimming the paper size and tightened circu tion by cutting out unnecessary freebies to advertisers and Re colleagues. Smith also eliminated fax machines, a hangover fr the days before e-mail, and cut down travel and entertainm by using videoconferencing. "We were ferocious," he says. " focused on a thousand little things."

In two years managers like Smith had cut costs by $460 m lion, and Davis rewarded them with $1.2 billion in new inve ments evenly spread over three years. Smith got to tota redesign the visually tired *Broadcasting & Cable* (relaunch t month). Harcourt Education, a powerhouse in medical a schoolbook publishing, came up for sale in 2000 and Davis it for $4.5 billion, net of disposals.

Divisions that had never before asked customers what th thought were ordered by Davis to commission independent m ket research to uncover and improve on product weakness Reed medical editors spotted that hospitals' largest legal liabi was the result of nurses giving the wrong drugs to patients, they created Virtual Clinical Excursions, an inter tive CD dubbed "Nursetendo" in which a virtual k ney patient goes into shock and dies.

Says Brian Nairn, the Scot running the mark leading medical division from Philadelphia, "Edit really knew their authors and their segment. Bu was very much 'Sign up an author and wait two three years for a manuscript,' rather than sayi 'This is what we think doctors and nurses ne what the book should look like and what the co tent should be.' And there had been very little dev opment of electronic products."

Reed Elsevier is using the Internet to fashion r products tailored to customers' needs, but Web-ba products PDxMD or CourtLink can't crash whe doctor or lawyer is in the "heat of battle." That's v Davis has also spent some $300 million on the co pany's engine room, a kind of military comma center in a bunker in Dayton, Ohio: 2 petabytes data storage (50,000 times the storage you wo get on an average household Dell PC) to ensure t 1 million customers a day get their responses wit four seconds. The back-up power supply includes

LIFE AND DEATH

## MDownload

A ... a 32-year-old mother struggling with bulimia, was sent to Dr. Michael ... kopf's West Orange, N.J. medical practice by a psychotherapist. Anna wanted to become pregnant again but had irregular menstruation due to her eating disorder. They discussed nutrition and mood-stabilizing drugs, but Anna was anxious that an antidepressant might make her become fat.

So Dr. Rothkopf turned to his laptop and through his house-designed records system quickly accessed PDxMD, a medical information service, and discovered that the disease's specialists recommended 20mg doses of paroxetine. Rothkopf showed Anna a study that showed paroxetine reduced a bulimic's "purge behavior" by 54% over three months; a side effect was weight loss, not weight gain. Reassured by the clinical evidence before her, Anna agreed to treatment.

The just-released PDxMD costs $349 a year, is delivered over the Web via PC or a handheld device and provides internists and family doctors with constantly updated diagnostic options and treatments on 450 hard-to-manage conditions. It also makes small practices like Rothkopf's more efficient. Real-time peer advice and research that might previously have taken hours to rustle up now take only seconds to locate on user-friendly PDxMD. —*R.C.M.*

# ONE

(ONE DRIVER. ONE PICKUP. ONE RELIABLE NETWORK. ONE FEWER WRINKLE ON YOUR FOREHEAD.)

Instead of three different pickups and three different drivers for ground, overnight and international, Brown™ gives you one pickup and one driver. The same driver you know and count on. UPS's seamless, unified network makes shipping reliable, simple and easy – no matter what you're sending, no matter when it has to be there. So relax. You've got Brown.

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Reed Elsevier's $2 billion revenue legal information business was one of the units that suffered most during the Anglo-Dutch wars. Its LexisNexis division invented modern electronic legal searches back in the 1970s but lost its lead to Thomson's West in the 1990s. According to Merrill Lynch, market leader Thomson has 28% of the $10 billion global market in legal information. Reed Elsevier at 19% is Thomson's main competitor in the U.S.

"When Crispin came in he asked us what investment we needed to beat West," says Lou Andreozzi, head of North American legal markets. "It was the first time anyone asked us that."

Thomson had a major competitive advantage with case-law summaries dating back to the 19th century. So Andreozzi hired 800 legal editors in a $100 million project that is building a rival backlog of case-law summaries and links. Payoff: LexisNexis usage by small law firms was up 39% last year.

For its big customers, Reed Elsevier is building new capabilities. DeVito of Skadden, Arps cites LexisNexis' CourtLink, which notifies him every time a patent lawsuit is filed anywhere in the U.S. "Many times I know, before the client knows, that they've been sued," says DeVito. "I'll even have the complaint in hand. I've been able to get fairly important litigation for that reason."

DolphinSearch, distributed by Reed Elsevier and now in use in the Enron case, is a litigation tool that uses artificial intelligence to analyze language and retrieve hard-to-find documents.

The killer pitch: Your firm represents a Wall Street bank. The SEC is investigating its IPO practices, class [illegible] are piling up and somewhere in the bank's electronic files there is an incriminating e-mail from one of the bank's analysts.

"Wouldn't it be great," the salesman asks sweetly, "if you could find that e-mail *before* it gets out to the SEC or to the plaintiff lawyer?" Companies copy their files to Reed Elsevier electronically (just as they would to, say, the Department of Justice during an investigation), and the publisher converts them for reshuffling by DolphinSearch to be expeditiously waded through.

Impressive, but the jury's still out. Some analysts' half-year reports suggest organic top-line growth at LexisNexis was 4%, versus Thomson's 3%; others say West is clawing back market share with law students. "We took a lot of market share from Reed Elsevier the last few years," says Michael Wilens, president of Thomson West, "so they have a goo[illegible] place to start from if they want to ge[illegible] better." Davis responds: "Thomson i[illegible] an excellent competitor, but it's ou[illegible] turn for the next five years."

That is, unless the Internet ruins hi[illegible] business. Davis is dismissive, citin[illegible] Reed Elsevier's economies of scale, bar[illegible]riers to entry and its attentiveness t[illegible] customers' needs. Derk Haank, the sci[illegible]ence division's Amsterdam-based bos[illegible] spends an hour at a blackboard show[illegible]ing the company's ScienceDirect ha[illegible] put so much material at scientists' fin[illegible]gertips that cost-per-page-vie[illegible] has more than halved in the las[illegible] three years. Footnotes and references i[illegible] scientific paper[illegible] are linked so [illegible] takes only second[illegible] to see a paper[illegible] entire intellectua[illegible] backup.

James Neal, [illegible] big customer a[illegible] head of Colum[illegible]bia University [illegible] libraries in Ne[illegible] York, gives th[illegible] firm top mark[illegible] for creating use[illegible] friendly research products, but also ha[illegible] a six-point gripe list with Reed Elsevie[illegible] that ranges from price-gouging t[illegible] concerns that scientific journals are in[illegible]creasingly being consolidated under on[illegible] corporate banner. Britain's Office of Fa[illegible] Trading calculates Reed Elsevier's pric[illegible] increases since 1999 at a compounde[illegible] 22% rate.

That kind of pricing is going to cr[illegible]ate a big temptation for new compet[illegible]tors—or just resentment by users. La[illegible] year 11,000 scientists signed a pledg[illegible] stating that they would publish only i[illegible] journals that "grant unrestricted free distribution rights" t[illegible] original research they have published. Meanwhile, Sparc—[illegible] worldwide alliance of research institutions, libraries and organ[illegible]zations encouraging competition—has started publishing riv[illegible] journals. Columbia's Neal is the group's chairman.

Davis professes to be unfazed by all of this, even as he brac[illegible] for battle. "I would be horrified," he says earnestly in his mode[illegible] conference room in London, "if we ever lost our evangelic ze[illegible] and didn't challenge everything we were doing. If there ever w[illegible] any complacency, I should be fired."

## Big Is Better

Reed Elsevier outranks some rivals that are better known in the U.S., and it has trumped the price charts of relevant stock indexes.

### By the Numbers

**44%** Reed's share of new state elementary school book "adoptions" last year.

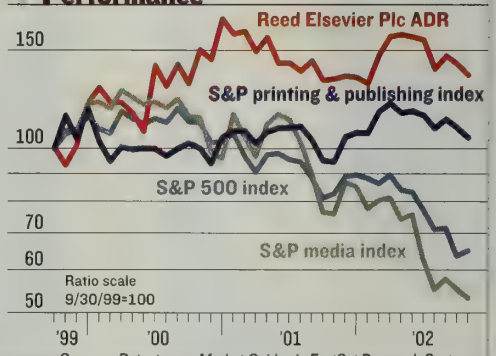
**18%** Decrease in ad revenues at Reed's U.S. trade magazines for first-half 2002. U.S. trade magazine market as a whole: –21.3%.

**100 million** Commercial searches handled by LexisNexis per year.

**9 million** Scientists and researchers who use ScienceDirect as their resource of choice.

*Sources: Reed Elsevier; Business Information Network.*

### Performance




*Sources: Datastream; Market Guide via FactSet Research Systems.*

### Sales and Valuation

| Company/where traded | Sales ($bil) | Market cap ($bil) |
|---|---|---|
| **Reed Elsevier Plc**[1]/London | $7.3 | $18.4 |
| **Thomson**/NYSE | 7.1 | 16.0 |
| **Pearson**/London | 6.1 | 7.5 |
| **Reuters Group**/London | 5.7 | 4.3 |
| **McGraw-Hill**/NYSE | 4.7 | 11.6 |
| **VNU**/Amsterdam | 4.3 | 6.0 |
| **Wolters Kluwer**/Amsterdam | 3.4 | 5.3 |
| **United Business Media**/London | 1.4 | 1.2 |

Note: All figures in U.S. dollars. Market value as of Oct. 11. [1]Includes Reed Elsevier NV. *Source: Worldscope via FactSet Research Systems.*

toyota.com

**THE RESTYLED 2003 AVALON.** With a car this luxurious, only one question remains – sparkling or still?

2003 Toyota Motor Sales, U.S.A., Inc.

# Search and Ye Shall Find

The brain of multinational Reed Elsevier is in Dayton, Ohio. There, with technology first developed in the 1960s for a local Air Force base, 1,000 engineers work to hone the company's database search systems. The databases themselves, 15,700 of them, reside in a server farm below Reed's Dayton campus. The collection is growing 13% annually in terms of searchable documents, of which there are now 4 billion online. The engineers' job is to standardize the latest court cases, news articles, scientific journal writeups and bankruptcy filings for the company's giant mainframes to catch.

In the early days this meant assigning a programmer to code each item into the right format. Today nearly every data vendor and many government sources, like courts and motor vehicle agencies, offer data that can be sorted automatically, freeing Reed's engineers to focus on grouping by subject relevance according to the company's proprietary taxonomy.

Popular free Web search service Google, by comparison, will include items posted online, but it ranks them not just by germaneness to the search query but by how many different Web sites link to a particular posting. An obscure but rich article—if it's posted at all—is therefore likely to be buried among hundreds of "hits."

Because each piece of data can be [illegible] Reed's services can offer cus[illegible] [illegible]lerts as well. ScienceDirect can notify a researcher each time one of his articles is cited in another published work, a big ego-boost for scientists. Lawyers working with the Lexis legal research service can also get an e-mail whenever a case is filed relating to a particular client or legal issue.

Price comparisons between Reed and its competitors are difficult because fees—often discounted—are related to what services the clients want and how many users they have. But even a premium service can be cost-effective: A university using ScienceDirect, for instance, could save perhaps two-thirds of what a paper-journal subscription would cost.

So how do Reed's offerings match up? We tried them, à la carte, on the Web, against competitive pay and free sites.

## LEGAL

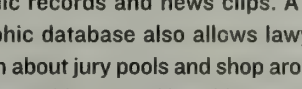
*Search: Benzene*

**Lexis.com (Reed Elsevier)**

Our search for benzene cases in New York's courts yielded 24 cases. The list had an overview of each case and citations of the benzene mentions within the decision. Each case download costs $9. The company touts its linked legal and news research databases, which allow lawyers to find not only cases and laws but also dirt on potential witnesses or experts using public records and news clips. A demographic database also allows lawyers to learn about jury pools and shop around for an amenable venue, like a blue-collar town for a workers' comp case.

### Balanced Portfolio

Reed Elsevier's user base breaks down fairly evenly across revenue sources.




*Source: Reed Elsevier.*

**Westlaw.com (Thomson)**

Westlaw's online offering allows users to pay $5.50 for an individual case listing, including Westlaw's signature editor-penned headnotes, detailing the key legal points of the case. We counted 30 New York State cases involving benzene. Each case had a listing of linked citations to both other cases and relevant statutes, including state constitutions. The case listings came with color-coded flags indicating if a case had been overturned or superseded by another ruling. Westlaw claims that its 90 attorney-editors catc[illegible] and fix mistakes in court filings that Lexi[illegible] staff misses, like a bankruptcy case file[illegible] in Delaware earlier this year that missed [illegible] point of Pennsylvania trade-secret law.

## NEWS

*Search: Richard M. Schulze, billionaire*

**LexisNexis (Reed Elsevier)**

We wanted articles that not only name[illegible] Schulze, the founder and former chief ex[illegible]ecutive of electronics retailer Best Bu[illegible] but also discussed him at length. So w[illegible] searched for his name in the headline [illegible] lead paragraph and at least five time[illegible] throughout the story, as well as for Be[illegible] Buy. We located 22 articles, with the fir[illegible] hit an in-depth trade magazine intervie[illegible] with Schulze, followed by an article abou[illegible] Schulze's formal retirement at this year[illegible] annual meeting. LexisNexis' service ha[illegible] rights to the *New York Times* archive[illegible] going back beyond 90 days.

**Factiva (Reuters and Dow Jones)**

An analogous search came up with 2[illegible] articles. The first hit was a differe[illegible] trade-publication piece on Schulze and h[illegible] successor, but the second hit was the sam[illegible] article that Lexis had found about Schulze[illegible] retirement speech. Factiva has sole rights [illegible] the full text of certain Dow Jones public[illegible]tions (*Wall Street Journal, Barron's*).

## SCIENTIFIC

*Search: Marginal-zone lymphoma*

**Scirus (Reed Elsevier)**

This Web arm of ScienceDirect turned u[illegible] 1,680 hits, of which 861 were scientific jou[illegible]nals and 819 were Web sites. The first lis[illegible]ing was an article from a cancer journa[illegible] available through ScienceDirect for $3[illegible] Other hits led to journal articles posted fr[illegible] on their authors' university Web pages.

**WebMD (free Web site)**

This free medical information site can[illegible] up with five hits, the first of which was [illegible] highly technical entry on this type of ly[illegible]phoma. A linked archive had articles ran[illegible]ing from descriptions of types of ly[illegible]phoma to one on the fatigue suffered [illegible] cancer patients.

*—Chana R. Schoenberg*

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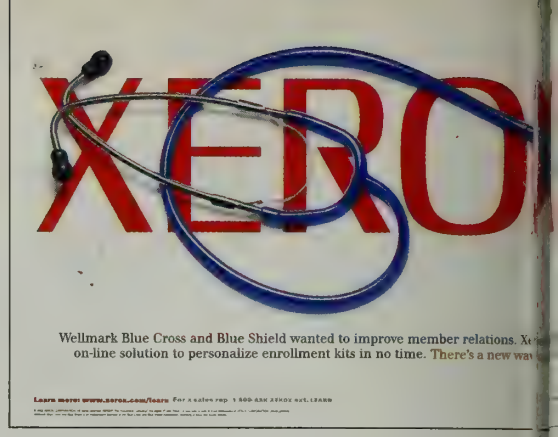


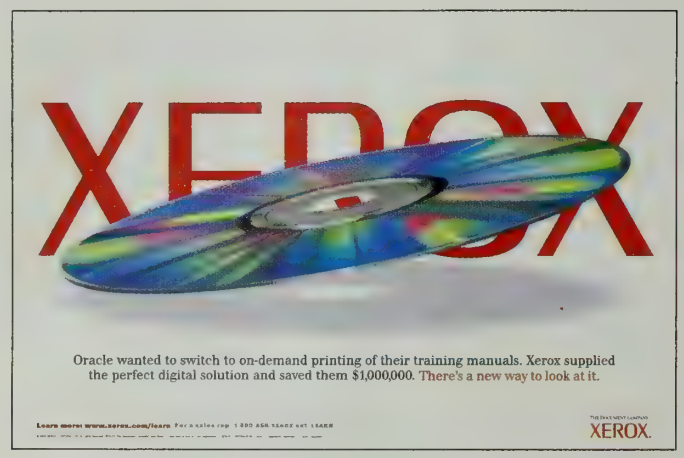


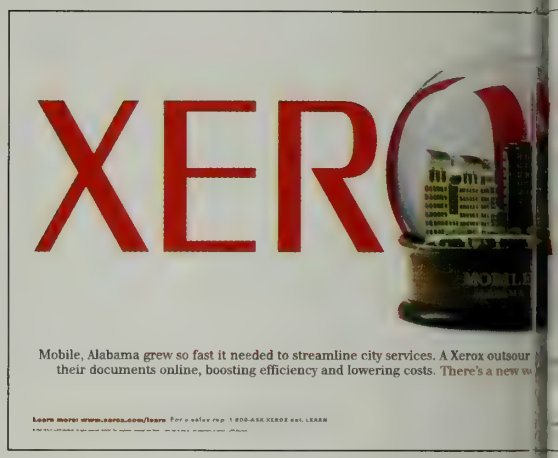


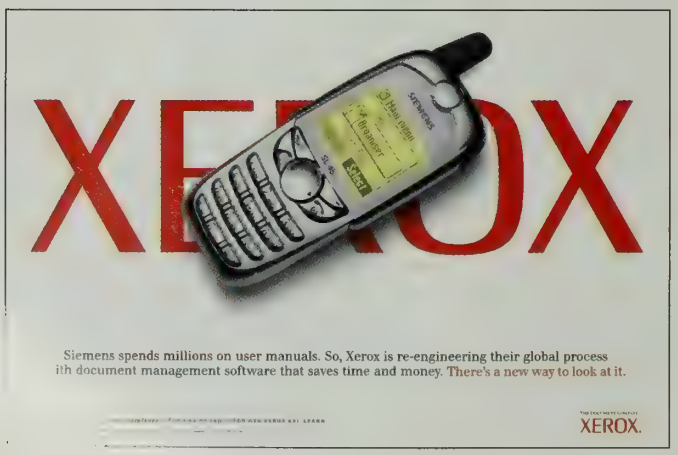


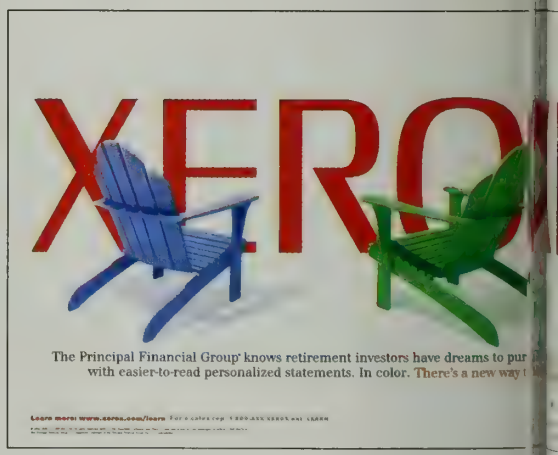


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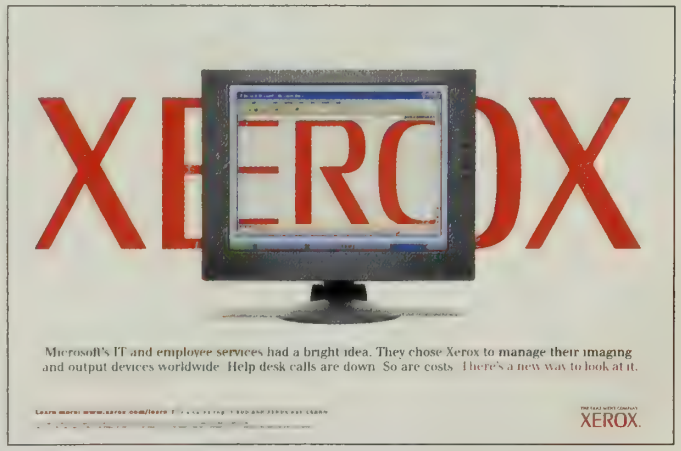


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High-definition television is one powerful technology. Unlike so many digital advances, it is not just incrementally better than the analog standard it replaces, but so superior that anyone who isn't blind can see it.

Digital broadcasting first arrived in the U.S. four years ago, federally mandated as the successor to a fuzzy analog system developed more than half a century ago. But thanks to wildly pricey equipment and nothing much to watch on it, high def initially met with astonishing indifference among broadcasters, cable

# The Big Picture

## High-definition television is ready for its close-up. Here's a buyers' guide.

BY STEPHEN MANES

providers and viewers. Now the general public is beginning to get the picture. According to the Consumer Electronics Association, more than 1.5 million digital televisions were sold in the first nine months of the year—83% more than the same period last year.

If you're interested in improving the images you watch—alas, there's not much you can do about the shows themselves—a high-definition system will do it. Prices are dropping: Small-picture HD-ready sets

PHOTOGRAPH IN TV BY H. ARMSTRONG ROBERTS / CORBIS

**Pictured above: Samsung's 50-incher. It's done with mirrors.**

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*Everything you need to know in HDTV.*

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*More glorious displays, beefier DVDs.*

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*Wires, remotes and how to tweak the set.*

can be had for $700, big-picture units for $1,500 and outboard decoder boxes for $400. HD-ready sets are great for watching DVDs, and there's more high-def programming than ever from networks, cable systems and satellite providers.

There's so much high-definition equipment on the market today that I can't pretend to have looked at more than a fraction of it. But at the recent CEDIA Expo, the annual extravaganza of the home theater world, I spent hours looking at dozens of HDTV sets. Then I came home and put some preproduction units through their paces. When visitors dropped in while my living room was full of this stuff, they invariably had the same reaction: Wow!

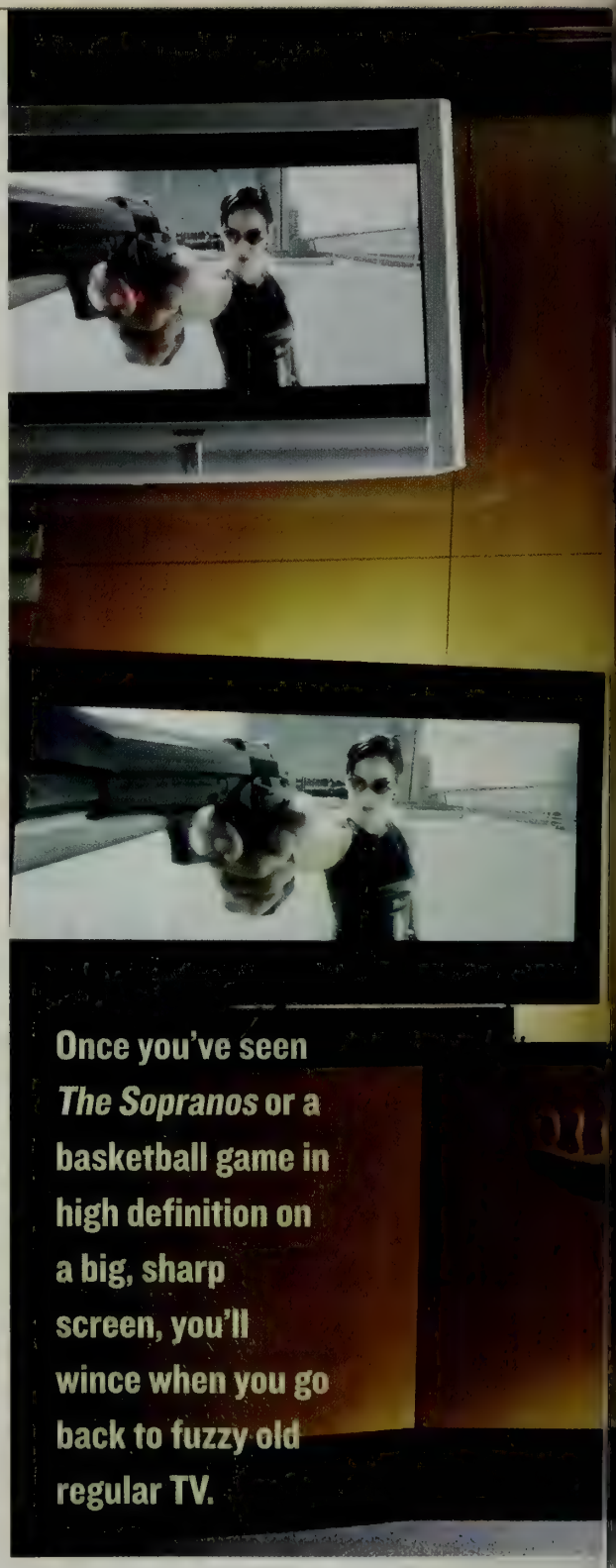
Once you see *The Sopranos* or a baseball, football or basketball game in high def, filling a big, sharp screen, you'll wince at having to go back to fuzzy regular TV. High-definition pictures are roughly six times more detailed than traditional ones. Don't confuse high-definition TV with digital cable or digital satellite systems. They're digital, all right, but because they compress incoming signals and spit them out with missing data, the result is generally inferior to plain old TV.

My personal high-def dream machine is Marantz's new VP-12S2 projector. So what if it costs $12,500, not counting the screen? Watch a movie a night and in a couple of years it'll pay for all the tickets you would have bought at the sticky-floored cineplex. In a demo room and my living room, this digital projector produced stunning results from HDTV and DVD, and surprisingly good pictures from standard TV, thanks to an excellent lens and advanced signal processing.

But for those politically opposed to buying a TV as costly as a subcompact car, there are used-car-priced alternatives. Plasmas like Hitachi's 42-inch 42HDT20 are available for around $8,000. And a whole slew of big rear-projection models are available for $2,000.

But be careful out there. HDTV is dogged by the same growing pains as the analog era of Howdy Doody. Viewing network shows in eye-popping high def may mean bolting an antenna to your roof and aiming it at the nearest TV tower. And if you're interested in watching prerecorded material, curb your enthusiasm. Hollywood has trickled out a whopping 15 feature films, including such blockbusters as *Galaxy Quest* and *Big Momma's House*, plus a smattering of video productions.

If you're on the fence about buying a digital TV, here's what you n[illegible] before you suffer through the sales pitches at your hi[illegible]ctronics retailer. Think about what you watch—a[illegible]u watch it. Don't buy any TV equipment until you've [illegible]orm on three kinds of content: high definition, DVD [illegible]d standard TV programming. HD sets' dirty secret is t[illegible]an make standard TV, the programs you're likely to w[illegible] often, look awful. You can find HD-ready sets in both t[illegible]ish traditional 4:3 proportions and the more cineplex-lik[illegible]creen. You probably don't want the 4:3 set; that would det[illegible]'s big-screen mission. But you sacrifice a bit with 16:9 becau[illegible]hey force traditional programming into a pillarbox format, w[illegible] black bars on both sides—and if you're not careful, the bar p[illegible]tern can burn itself into the screen.



**Once you've seen *The Sopranos* or a basketball game in high definition on a big, sharp screen, you'll wince when you go back to fuzzy old regular TV.**

High-def sets fall into three basic categories: direct-v[illegible], rear-projection and front-projection.

**Direct-view** sets such as LCDs and good old tube models [illegible]re typically bright but limited in screen size. High definition l[illegible]s fine on small screens, but the combination doesn't make m[illegible]n sense. You can now find slim, pricey plasma screens with di[illegible]nal measurements bigger than five feet.

Plasma HDTV: Big, flat and pricey. And who hid all the wires?

**Rear-projection** sets using multiple traditional tubes are by far ıe cheapest big-screen option, but the units can be heavy and ngainly; systems based on LCDs and Texas Instruments' mir-ɔr-flipping DLP chips are pricier but slimmer. Virtually all rear-rojection models tend to lose brightness when viewed from ven slightly above or below.

**Front-projectors** of any technology make it easy to fill a 100-inch screen, so they're the choice for true home theater and particularly well suited for movies, which have always been meant to be viewed by reflected light. But for best results, front-projection systems demand that the screen be chosen wisely and the screening room be dark. If you like to watch the ball game and read the sports section at the same time, front-projection is probably not for you. And projection sets, front or rear, will

require replacing an expensive lamp every 2,000 hours or so.

Once you've settled on the basic style of TV set, it's time to think about the technologies that deliver the picture: cathode-ray tubes or fixed-pixel systems such as LCD, plasma and DLP.

Venerable cathode-ray tubes remain the dominant technology. Since CRTs work by painting lines on a blank screen, they have the advantage of being able to adapt to incoming signals by changing their output. If a high-def signal comes in with 1,080 interlaced lines, a tube system can adjust its picture to match. If you switch to a standard TV signal at 480 lines, it can adjust to reproducing that too. Manufacturers have long experience with tubes, but they are subject to burn-in.

Direct-view CRT sets are heavy for their size, and they can't deliver the really big pictures that can make high definition seem so immersive. CRT rear-projection units are the cheapest solution for big HDTV pictures and probably the best at adjusting to handle big standard-definition pictures as well. They are prone to alignment problems because they use three separate beams of light, one each for red, green and blue. They're big, bulky and heavy. Exemplary but expensive: Sony's $4,200 KD-34XBR2.

Tubes also remain the standard in front-projection. But CRT projectors can be expensive and finicky compared with newer tech competition.

**Fixed-pixel systems,** instead of painting lines on the screen a CRTs do, light up an immovable grid of tiny dots, or pixels across the screen. Each screen can display a single best "native resolution, and pictures from all others must be mathematically "scaled" to fit. The de facto high-definition signal standar comes in at 1,920 x 1,080 pixels. A panel or projector that ca display only 1,280 x 720 pixels—the minimum for true hig def—will be forced to discard more than a million pixels. Tha sounds horrible, but the truth is, you may never notice. So fa no fixed-pixel system in the consumer market can display any where near the higher count, but lots of lesser system look great.

One big problem with fixed-pixel systems is "upconverting," taking a standard-definition image and blowing it up t fill far more pixels than it actually delivers. Whereas a tube s will at worst simply adjust its scan lines to fill the screen, fixed pixel systems are forced to compute which information to mu tiply and which to throw away. The process almost always gunk up the image with unpleasant visual hiccups. Although fixed pixel displays often look better than tubes on high-quality ma

## What's On

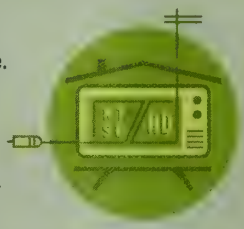
Digital channels have been on the air since 1998. Depending on who's counting, there are now more than 500 local stations transmitting digital signals. But that doesn't mean all high definition, all the time. What does it mean?

**High-definition signals that aren't.** Anything shot with old-style analog video equipment—which includes most sports and news programming as well as many prime-time shows—can only be "upconverted" to an attractive version of its fuzzy original self.

Film-based content is a far better match for high def, but quality varies depending on how much care is taken in the process. On one recent night, the CBS sitcom *Bram and Alice* looked grainy and flat; the Jackie Gleason biopic that followed was stunning in its depth and clarity.

**Corner-cutting.** Local broadcasters haven't bothered to retrofit their entire operations with expensive high-def equipment. The typical "high def" local news show starts with gorgeous wide-screen close-ups of the anchors but shrinks the screen and the quality when it goes remote.

High-def sports broadcasts often make do with less equipment than usual. The result: Fast breaks that are so clear you can make out every individual fan in the stands are marred by fuzzy graphics and standard-definition replays slapped on top.



**Delivery problems.** In many cases the only way you can get favorite network shows in high-definition (if they're presented that way in the first place) is a throwback to 1950: over the air via a roof antenna—or, if you're lucky, indoor rabbit ears. You may be out of luck if you live where reception is poor, which includes my house in Seattle and much of New York since the World Trade Center antennas were destroyed. But more cable systems are beginning to deliver high def.

CBS has been the most aggressive of the major networks on the HD front, now broadcasting all of its comedies and dramas in high def, along with *The Young and the Restless* and some sports events. ABC comes in second, with lots of shows some nights, few on others. NBC is a weak third, though Jay Leno appears in high def nightly. PBS and the WB do HD now and then; Fox offers no high-def at all.

The satellite providers each offer a high-def version of the eastern feeds of HBO and Showtime. West Coasters get the shows three hours earlier than usual, but have no way to record them. Though you can watch *The Sopranos* and some movies in gorgeous HD, many shows on HBO and Showtime are simply fuzzy upconverted versions of standard-def fare.

Both systems offer pay-per-view HD movies from sources other than the major studios. DirecTV offers the beautiful but inconsistent HDNet, the channel most often used for store demonstrations; Dish includes a special version of the Discovery Channel and, in cities where CBS owns its local affiliate, the CBS high-def feed.

A surprising number of local stations hide or omit HDTV schedule information on their Web sites. Two good sources for high-def schedules, both satellite and broadcast, are Hdtvgalaxy.com and Titantv.com.—*S.M.*

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terial, they tend to look far worse on low-def channels.

The fixed-pixel pack includes:

**LCD:** Thin, flat LCD TV sets that look like computer monitors are getting cheaper, but they're still extremely costly compared with their tube-based brethren. The few HD models that exist are small and pricey. Example: Samsung's model LTM405W, at nearly $10,000 for a 40-inch display—roughly double the cost of a comparable plasma screen. Avoid LCD projection systems, which are falling behind DLP technology in picture quality. LCDs tend to generate a "screen door" effect that reveals the gridlike pixels creating the image.

JVC's promising D-ILA technology uses liquid crystals in an unusual way—by mounting them directly on chips that control the way they behave. The company's $10,000 DLA-SX21 front-projector displayed beautiful images at the CEDIA show.

**Sharp's DT-200 projector: The picture looks a whole lot better when you turn out the lights.**

**Plasma:** Plasma flat-panels are the slim and sexy supermodels of the home theater world. They've grown bigger—now up to 63 diagonal inches—but their thinness makes them relatively easy to fit into a room without dominating it. They're hardly cheap: 42-inch models start around $3,000, 50-inchers around $6,500. And though they can and often do deliver dazzling high-definition images, closer inspection often reveals those images to lack gradation in the brightest and darkest portions. Burn-in can be a problem and so can stuck pixels, bright dead zones as unsightly as a green pimple.

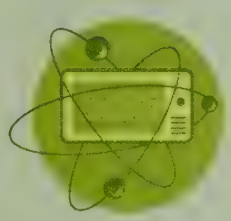
Careful comparisons at the CEDIA show convinced me that plasma screens with similar specifications produce wildly different image quality. Watch out for low-cost—well, relatively low-cost—screens with too few pixels or electronics inadequate to produce true high def. Plasma screens can be particularly ugly when displaying traditional TV.

**DLP:** Texas Instruments' mirror-flipping chips have been gaining popularity in lightweight front-projection units designed primarily for PowerPoint presentations. Now they've become centerpieces for home theater, with the best models using a new chip dubbed HD2, which has a native resolution of 1280 x 720 pixels, enough to make the highest resolutions look superb.

The $12,500 Marantz projector wins for sheer drool factor, but also excellent in the same exalted price range were two others that use the same HD2 chip: Sharp's $11,000 XV-Z10000U and InFocus' highly portable $10,000 ScreenPlay 7200. But even Sharp's portable DT-200 projector ($3,500), which uses a lower-end DLP chip with 800 x 600 pixel resolution, looked good—and its short-throw lens produces a huge image without having to mount

## What's Coming

It took more than 50 sleepy years to begin the transition from analog television to digital. Now TV is changing faster than ever.



In the next two years Sony plans to unveil HD sets using a new display technology called Grating Light Valve licensed from Silicon Light Machines. This little miracle involves using tiny chip-mounted diffraction gratings and laser light passed over them via a scanning mirror. Sony claims it can produce double the color range of traditional CRTs.

DVDs will soon get enough capacity to hold HD movies. Nine consumer electronics firm agreed in February to standardize and promote a new format called "Blu-ray Disc" that uses a shortwave blue-violet laser to read more than two hours of high-definition content stored on a DVD-size platter.

Today's high-definition sources are scrunched down with MPEG-2, a long-lived standard also used by DVDs. But newer algorithms offered by the likes of RealNetworks, Microsoft and the MPEG-4 consortium promise to compress content down to significantly fewer bits without sacrificing quality. That could free up bandwidth for local high-def channels over satellite or more high-def channels over cable systems. It could also work with online downloads or create DVDs that can stuff far more information onto a single disk. The good news: It would work with today's HDTV equipment. The bad news: You'd still have to replace your DVD player. And an easy way to record HD for time-shifting at home is still missing. Echostar's Dish Network is developing two TiVo-like boxes, but until they arrive next year, the only alternatives are DVHS tape or the hard disk of a PC using a $350 tuner card. —*S.M.*

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*Actual chip size measures 0.4 mm x 0.4 mm **Smallest RFID (radio frequency identification) chip

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way across the room.

Samsung puts the HD2 chip into its 50-inch, $4,000 HLM507W, whose less-than-80-pound weight and 22-inch depth makes it downright svelte for a rear-projection unit. Images were excellent with HD source material and good with DVD, but traditional material was sometimes hard to watch. In bright scenes I occasionally noticed a fleeting rainbow effect, a distracting byproduct of the DLP system's fast-spinning color wheel that produces color bars in your field of vision when you shift your gaze.

A minority of HDTV sets include built-in tuners that can pluck local channels' high-def signals from the air. Others, including many high-end models, require an outboard decoder box of some sort, whether satellite, cable or broadcast, to get HDTV signals. High-def satellite decoders typically decode over-the-air signals as well; they also tend to cost hundreds of dollars more than their low-def counterparts.

The more inputs an HD set has, the better, including at least two component inputs, two S-video inputs and standard inputs for things like VCRs. If you're going to use the set for games—be very careful about burn-in—it's handier if at least one set of the inputs is on or near the front.

One crucial input is DVI-HDCP, which stands for Digital Visual Interface/High-Bandwidth Digital Content Protection and is basically a way to protect Hollywood's content from being copied in digital form. You can bemoan the industry's desire to control the way you can use programs, you can bewail the idea of material that can't be copied and you can hope Hollywood won't be able to make it stick. But if studios do end up encrypting programs you want to watch and allowing them to travel only over this conduit—a scenario that many observers deem unlikely—you're out of luck without one, since there's simply no way to retrofit a unit that lacks it. Since many new HD-capable units include the DVI-HDCP connector, it makes sense to get one—but watch out for DVI jacks that lack HDCP.

One more connector is worth noting: FireWire, a.k.a. IEEE 1394. For the moment it's the only way to send programming digitally to a high-definition recorder such as JVC's $1,000 HM-DH30000 model, which uses a new tape format called DVHS. A FireWire connector in a set or a decoder box helps future-proof your investment. But for now FireWire is available only on Mitsubishi models and a smattering of others, as well as a few decoders.

HDTV generally sounds better than old-fashioned TV, thank to six-channel audio that beats standard TV's mono or stere You're likely to need a receiver to drive six speakers—particu larly if you have a plasma or front-projection display, whic often omit the speakers entirely.

Get yourself to a showroom and see what my friends wer wowing about in my living room. You may be so smitten wit watching big, crisp, gorgeous wide-screen images from the com fort of your La-Z-Boy that you'll find yourself staring slack jawed at anything at all you can find in high def—say, the thir rerun in a week of *Bikini Destinations: On Location wit TheBikiniNetwork.com at Lake Powell* on Internet billionai Mark Cuban's satellite-delivered HDNET.

Marantz's VP-12S2 projector: a $12,500 dream machine.

## What's Tricky

Take a look at that slim plasma screen hanging on the store wall with gorgeous Van Gogh images, and you may not bother wondering where all the wires went. But there are more than a dozen to worry about, for speakers, set-top box, antenna, DVD player, VCR, PVR and who knows what else. Somebody has to hide them.

With front projection, you've got a screen to worry about; for my tests I used Stewart Filmscreen's FireHawk material. But I didn't have to worry about making the screen disappear when not in use. And any complex system will beget a roomful of remote controls unless you integrate them with something like the Philips Pronto.

All the TVs I tested needed subtle tweaking to make the picture look its best. You can try this yourself with setup DVDs like the excellent *Avia Guide to Home Theater*, but at some point you may need to find and maneuver through the set's "service menus," which are generally hidden from mere mortals to keep them from screwing things up.

When you watch standard TV on a wide-screen set, you have to choose whether to put the image in the middle of the wide screen with blank vertical bars at the sides, or use the TV's electronics to zoom or stretch it to fill the screen at the expense of distorting or losing some of the image. With phosphor-based technologies—CRT and plasma—manufacturers recommend viewing the picture-in-the-middle mode no more that 15% of the time you use the set. Otherwise you risk burning the bar pattern into the screen.

Unless you dote on such arcana and your system is relatively simple, consider hiring somebody with home theater installation expertise. The finder service at www.cedia.net is a good place to start. —*S.M.*

# Michigan

TATE OF INNOVATION

ART I IN A SERIES: FOCUS ON LIFE SCIENCES

## n Life Sciences Corridor, Both ures and Companies Grow

Vickery Eckhoff

*From top: Technician using MALDi-QTOF mass spectrometer; two medical pressure sensors in a needle's eye; the Van Andel Research Institute; technicians working in clean room.*

For business start-ups, 2001 was no time to be out looking for funding—except in Michigan. er the last three years, a program arheaded by the State of Michigan's onomic Development Corporation EDC) has shown what innovation, colboration and some well-placed seed ney can do to spur investment, jobs l life-saving research.

Vith $1 billion from its tobacco settlent, the state established the Michigan Sciences Corridor, a project that has apulted Michigan's life sciences ustry into the spotlight and 22 echnology businesses in 2001 alone , well, business.

t nearly $2 billion, Michigan's life ences industry is growing fast. For the five years, the state was *Site Selec*n magazine's top pick for new busis investments and expansions, as l as Coopers & Lybrand's number one e for business attraction and reten programs, according to *Corporate ation* magazine. Michigan's resources many: 20,000 life sciences workers, r of the nation's top academic and earch institutions, prominent scien s and a progressive business climate t includes tax incentives, incubators SmartZones℠.

ince it began in 1999, the Michigan Sciences Corridor (MLSC) has award-$150 million. The Corridor's biggest ject to date is the Core Technology nce (CTA), a network of five advanced nology facilities being developed for by Michigan researchers affiliated n universities, private research insti s and biotechnology or pharmaceuti-firms. The centers will focus on genetically modified animal research, automated gene sequencing, determining protein structure and function, and developing scientific computation tools for analyzing the complex data from living systems.

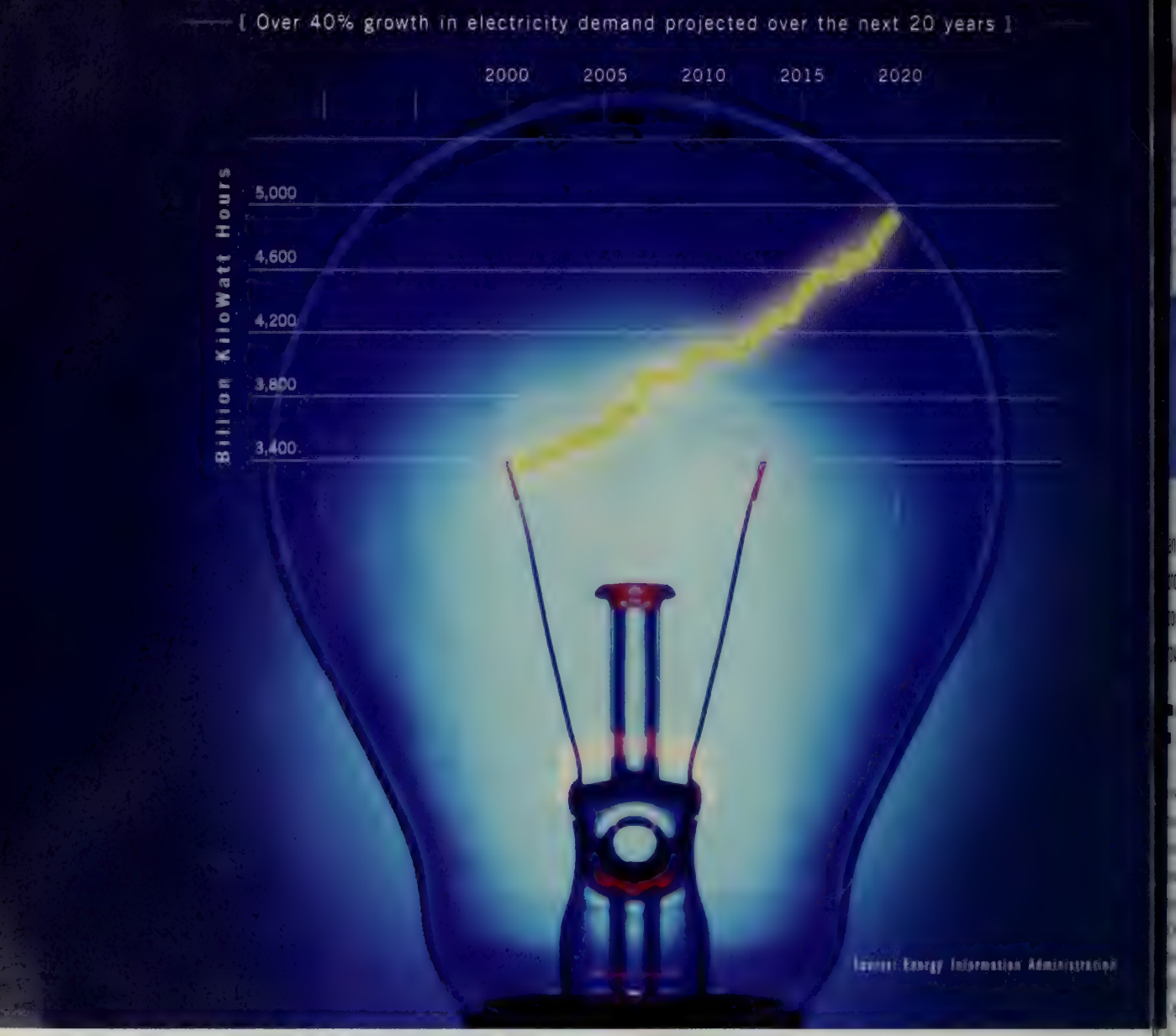
"This is an unprecedented effort to pull Michigan's leading research institutions together to share very advanced laboratory facilities that might otherwise be out of reach," says Fawwaz T. Ulaby, chairman of CTA's executive committee and vice president of research at the University of Michigan.

The Life Sciences Corridor also has helped a variety of start-ups get off the ground. These include Velcura Therapeutics, a biotechnology company founded in 2001 by Dr. Michael Long, a University of Michigan Medical School Department of Pediatrics professor. Velcura knows how to grow human bone outside the body, "something that's been done with other tissues, but for bone growth, it's a first," Long states. The company hopes to use its breakthrough technology to discover cures for bone disorders.

Support to Integrated Sensing Systems helps this cutting-edge firm create marketable prototypes of sensing systems small enough to fit in the eye of a needle and take key measurements inside the body. The Van Andel Research Institute (VAI), one of Michigan's newest facilities, is undertaking research into a reagent it had been testing for imaging in mouse models. "These antibodies are used to image tumors that express a specific antigen that VAI had been working on for a number of years," says the facility's director, Dr. George Vande Woude, a former head of the National Cancer Institute.

For these start-ups, the MEDC's support was critical, not simply because of the economy, but because they were new and perceived as risky by venture capitalists. "Investing $50 million a year is a potent catalyst, encouraging companies and institutions to share ideas and research, license that research out of the universities, and get it working and curing people," says MEDC's president and CEO, Doug Rothwell. "Before, that research stayed in the library," he notes. "Now it's on the street."

For more information on the Life Sciences Corridor and other MEDC services, call 1-800-946-6829 or visit www.michigan.org. ■

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# MARKETING

# Hungry Heart

**Can Harlequin, the venerable publisher notorious for cheesy, cheapo romance books, appeal to a more sophisticated crowd?** BY LEA GOLDMAN

FOR NEARLY HALF A CENTURY HARLEQUIN Enterprises Ltd. has peddled lightweight tales of love and lust told on cheap paper with horrid covers. Easy to laugh—unless you're among the women of a certain age who can't get enough of those dime-store bodice-rippers. These insatiable fans are the reason the world's largest producer of romance fiction cranked out 1,100 of its namesake titles last year, five times as many romance books as Harlequin's closest rival, Kensington Publishing.

All that heavy breathing has kept shareholders satisfied, too. The Toronto-based publisher is the most profitable unit of Torstar, the media company that trades on the Toronto Stock Exchange and also owns popular Canadian newspapers, including the *Toronto Star*. Harlequin posted $74 million in operating income (earnings before interest, taxes, depreciation and amortization) on $377 million in sales last year. Since October of 1999 Torstar has averaged 19% annual returns.

But like all great love stories, there's drama here: Earnings and sales in the Harlequin division have been sluggish since 1997. That's when the popular "chick lit" publishing category took off with the success of Penguin Putnam's *Bridget Jones's Diary*, a bestseller about a single gal and her dating woes. It inspired a hit movie and spawned a slew of copycat tales from mainstream publishers.

Since then, Harlequin has lost younger readers to

**Lusting after a bigger audience: Harlequin Enterprises' Donna Hayes.**

bigger, more marketing-savvy publishing houses that deliver women's fiction that's more contemporary and lively than Harlequin fare. Much of this new stuff is aimed at young single women who want to read novels about guys, shopping and the search for the perfect hair color, such as *The Dominant Blonde*, by HarperCollins' Avon Books. But this year, too, there are some hip new books aimed at older gals—Harlequin's sweet spot—like *I Don't Know How She Does It*, a hot book released last month by Knopf. It's about a thirtysomething Londoner who juggles two kids and a job as a hedge-fund manager.

These books are romancing Harlequin's readers and keeping younger women from discovering its more old-fashioned tales, frets Donna Hayes, Harlequin's new president and publisher. Consider Harlequin's graying readership base: In 1992 the romance publisher's average reader was 39. Today she's 47.

And mainstream publishers are poaching some of Harlequin's star writers. One of its most popular scribes, Nora Roberts—better known by her nom de plume J.D. Robb—recently ditched the publisher for Penguin Putnam, which owns Viking. (Harlequin still publishes her backlist.)

Now long-sleepy Harlequin is fighting back. Under Hayes, it's pushing a new series of modern women's fiction under an imprint called Red Dress Ink. The books, such as *Dating Without Novocaine* and *Milkrun*, target single gals who are more than two decades younger than Harlequin's average reader. These books are no more likely to win literary prizes, but they are more contemporary: Heroines have a better chance of flitting off to Europe alone at the end of the book than settling down with Mr. Right.

These new tales don't come cheap. Red Dress paperbacks sell for $13 a pop, more than twice as much as a traditional Harlequin. The higher price tag helps offset the cost of producing and marketing these books, which have better-quality paper and cover graphics to help them in the dog-eat-dog battle for prominent shelf space in mainstream bookstores.

It's new territory for Harlequin. The publisher pioneered the concept of stocking cheap paperbacks in discount venues, such as dime stores and supermarkets. Thing is, the single, professional urbanites who are Red Dress' target readers don't buy books in those places. They shop in traditional bookstores. "We need to be in more bookstores, certainly," says Hayes, 46.

1914

1923

1939

**By the Numbers**

**2,750** smooches occurred in Harlequin books last year.

**150 million** The number of books Harlequin sold worldwide in 2001.

**12** The number of times beefcake model Fabio posed for a Harlequin cover.

**3.5 million** men read romance fiction every year, compared with 37.9 million women.

**2 hours** The average length of time it takes to read a Harlequin paperback.

*Sources: Harlequin Enterprises; Romance Writers of America.*

1945

1954

1964

So Harlequin is aggressively courting traditional booksellers, including Barnes & Noble and Waldenbooks. Hayes plies the chains with advance copies, fancy display racks and authors, like Ariella Papa, who are made available for readings and signings. Papa read from her Red Dress book *On the Verge* to a standing-room-only crowd not long ago at a Barnes & Noble in Manhattan. Harlequin even offers to pick up the tab for splashy Red Dress cocktail parties, like the one held in July at the flagship Mondadori bookstore in Milan. And there are big-screen aspirations: Harlequin for the first time has hired an agent to shop Red Dress titles to Hollywood.

It costs money. This year Harlequin is shelling out $10 million on promotions and ads—42% more than it spent five years ago—in part to promote its Red Dress series and Mira, its first line of hardback books, which cost $20. Bold-faced ads pitching "Life's Little Curves" appear in magazines like *People* and *Cosmopolitan*, featuring images that grace Red Dress covers, such as martini glasses and urban chicks in pointy-toed pumps. It's also landing reviews for its new books in popular magazines—another first.

Not that the company is shedding all its old stripes. Harlequin scrimps by soliciting manuscripts from young writers, such as Sarah Mlynowski, a 24-year-old Harlequin office assistant. Some aspiring scribes collaborate, such as the group in Brooklyn, N.Y., that gathers to brainstorm Red Dress story lines over muffins and mimosas. The writers get upwards of $10,000 for each manuscript, although they can make more off royalties if the book is a big seller. Harlequin is equally parsimonious with many of its authors, although some better-known writers command $30,000 per manuscript.

Realizing that many readers wouldn't be caught dead with a Harlequin, Hayes doesn't put the corporate name anywhere in the pages of Red Dress or Mira books. Still, she's counting on the new brands to significantly boost Harlequin's sales over the next five years. It's a good bet. Even though the contemporary books currently represent just 5% of Harlequin's North American sales, the contemporary adult fiction market is more than twice as large as the $1.5 billion (sales) market for traditional romances. "When you describe us in ten years, you'll say we are the world's dominant player in women's fiction," Hayes says.

Harlequin tales, after all, always have a happy ending. F

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# ENTREPRENEURS

SIAN KENNEDY FOR FORBES

# BROTHERS IN ARMS

## The Fertitta siblings, who have built a casino fortune, like to fight. Can a passion beget a business?

BY PETER KAFKA

LORENZO FERTITTA'S PARENTS WOULDN'T LET HIM BECOME A FIGHTER. THEY NEVER said anything about running a fight club. Now 33-year-old Fertitta and his brother, Frank III, 40, get to do just that. The brothers' day job is running Station Casinos, a $912 million (2001 revenues), second-generation, off-the-Strip casino operator that caters more to Las Vegas locals than to tourists (nary a pirate ship nor a waterfall in sight). Their passion is running Ultimate Fighting Championship, a few-holds-barred fight circuit that targets young men with bloodlust.

Good luck. The sport got its start a decade ago, when promoters pitched it as a modern-day gladiator match minus the big cats. A species of "mixed martial arts," ultimate fighting is a combination of boxing, kickboxing and wrestling, as well as body slams, roundhouse kicks and forearms to the face. Matches take place in an octagonal ring lined with chain-link fence, and fighters win by a judge's decision or by forcing their opponent to quit. The fights generated interest from pay-per-view cable audiences—and disgust from the morality police. Under pressure from politicians like Arizona Senator John McCain, they were banned in some states and eventually dropped from cable TV. Now the Fertittas, who bought the franchise in 2001, must scratch for legitimacy and an audience that is less inclined to watch wrestling and boxing.

Call it a draw, so far. The brothers claim their holding company, Zuffa—colloquial Italian for "fight"—is breaking even on revenues of $7.5 million. They're back in the good graces of cable outfits and, to a lesser extent, state regulators. But while they've increased viewership fivefold and moved from 2,000-seat theaters to 10,000-seat arenas, ultimate fighting still barely qualifies as a niche sport. "We think there's an interesting business opportunity, but it's high risk," Lorenzo admits.

Still, there's less at risk for these guys than for run-of-the-mill fight promoters. Their 26.5% stake in Station—Frank is chairman and chief executive, Lorenzo is president—is worth $220 million. The brothers insist they've spent little on the fights beyond an initial investment in the "low seven figures."

Why not stick to running slot machines? Lorenzo Fertitta was first exposed to the sport itself while at his last job, as a member of the Nevada State Athletic Commission. Then-UFC owner Robert Meyrowitz had come to the state board seeking approval to run fights. The commission never formally ruled on the request, but as part of a fact-finding mission Fertitta flew out to Iowa to watch a series of brawls. "The thing that really shocked me was the quality of the fighters," he recalls. "They were world-class athletes. I had this perception that these were just guys getting off a barstool and trying to hurt each other."

The Fertittas were hooked. They started taking weekly fighting lessons in the basement gym at Station's headquarters; lessons morphed into daily sparring. (The brothers say their limited liability company contract calls for any dispute between them to be resolved by a fight judged by Zuffa's president.) When Meyrowitz asked them to buy a 50% stake in his operation in 2000, they bought the whole thing instead.

Task number one: getting viewers. That meant courting In Demand, the cable consor-

**C'mon, put 'em up: Lorenzo and Frank Fertitta are trying to revive a much-sullied sport.**

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ım that controls the lion's share of the y-per-view business. At that time only 18 illion households with satellite dishes uld get the fights; Zuffa needed In Deand's customer base of 28 million, too. ıt cable operators were wary—until the rtittas received licenses from states with ajor fight markets.

Their Vegas roots helped the brothers ıck open some doors with state athletic mmissions in New Jersey and Nevada. get approval they had to agree to a ies of safety rules: Lightweight gloves e in, for instance; kicking your opponent the head when he's on the ground is ıt. They also upgraded production vals, booking larger venues, adding more

**By the Numbers**

## Smaller Screen

Excluding movies and porn, pay-per-view dollars have been shrinking since 1999, due to fewer big-time boxing matches and declining interest in pro wrestling.

**$2.2 billion** Total pay-per-view sales in 2001.

**39%** Decline in pay-per-view event revenue since 1999.

**8 seconds** Fastest knockout in the history of ultimate fighting.

Source: Showtime Event Television; Ultimate Fighting Championship

cameras and a sprinkling of lasers, rock usic and fireworks throughout their ows. "The Fertittas have done a good ," says Daniel York, senior vice presint at In Demand. "They produced a tter, safer product and made a commitent to marketing the brand."

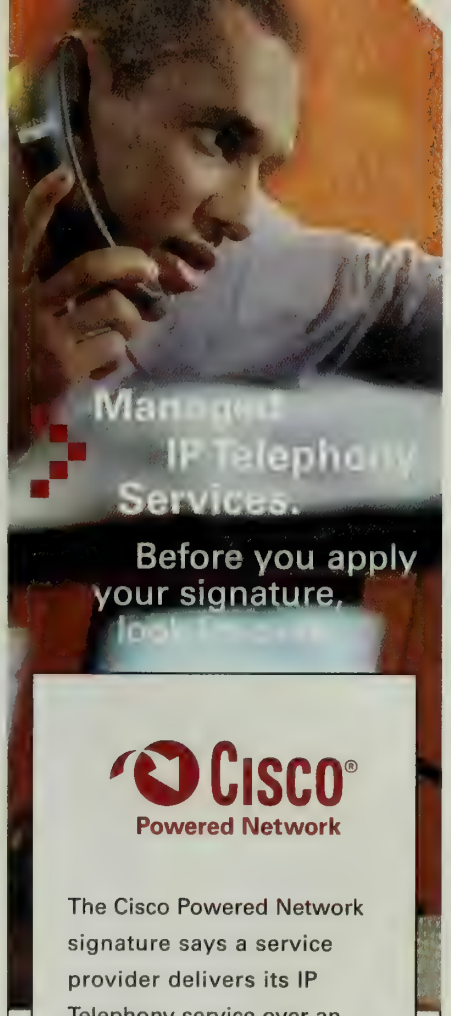
But the clincher was their willingness take it on the financial chin. Promoters r big boxing matches can get 50% of the y-per-view retail price from cable operors. The Fertittas, desperate to get back ıto cable, settled for much less—an estiated 40%. "It wasn't like I was coming in th [Lennox] Lewis and [Mike] Tyson," ys Lorenzo. "I didn't have a whole lot of gotiating leverage."

Which makes turning a profit even ugher. The Fertittas' goal is 150,000 buys, an average of $30 each, for each of the six e events they put on every year. Right now they're getting about 55,000 buys. That forces them to cover the $1.3 million average cost of a fight with revenue from the live ticket sales and by airing "best of" fights six times a year, which draw about a third of the viewers of the live fights, but cost nothing to produce.

They could use a marketing boost. Big boxing matches can count on free publicity from the sports press, while pro wrestling puts on hours of free television every week, all designed to get viewers to buy pay-per-view events each month. Zuffa hasn't had much success wooing the mainstream press, but it may have more luck with TV. In August it ran two hour-long shows on Fox Sports Net, which says the heavily promoted fights got a spike in viewership from the boxing show that normally ran in that slot. The brothers are looking for a cable network to air a weekly show; the major broadcasters are a poor bet, thanks to an already full schedule of programming and NBC's calamitous adventure with the XFL.

Growth also depends on winning over more state commissions. New York, which banned the sport in 1997, doesn't plan to reconsider its decision, but California, a hotbed of martial arts and ultimate fighting's largest potential customer base, may come aboard soon. A proposal to license the sport is under review and could be approved in six months. Meantime, the Fertittas are trying to boost the entertainment value of the brawls, introducing rules to decrease the amount of time fighters spend locked in holds on the ground and paring the number of fighters under contract so fans will see the same stable of grapplers more frequently, as in pro wrestling.

Expect to see a lot more of Phil (New York Bad Ass) Baroni, who arrives at fights in a red satin robe with an entourage of ring girls. And Chuck (The Iceman) Liddell, who sports a bright green Mohawk and, less well-known, a B.S. in business from California Polytechnic State University in San Luis Obispo. The brothers promise they won't gin up storylines to make the fights more popular. Says Lorenzo, "We're purists." F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# PROPPED UP

"Ready for some aerobatics?" Jerry minds the plant, Char the books.

## The Mehlhaffs rescued a small aircraft company by taking production almost totally in-house.

BY MARK TATGE

THE SINGLE-ENGINE PLANE SPEEDS down a runway bounded by cornfields, its tail wheel jostling about until Jerry K. Mehlhaff pulls the stick to lift the two-seater's nose upward. A rush of weightlessness sets in as the plane soars above Wisconsin's bright autumn treetops and the glistening Fox River.

"Are you ready for some aerobatics?" Mehlhaff says. No need: What he and his former wife, Charlene, have done to revive the once-defunct planemaker, now called American Champion Aircraft, qualifies. At one time bankrupted, then neglected, the company earned $1.2 million pretax on sales of $8 million last year by custom-building 1940s-style, lightweight planes with a base price of $71,000 to $111,000 apiece.

How can a small aircraft maker gross 15% on sales in an industry where the average profit margin runs 9% to 12%? The key is keeping overhead low—little advertising, for example—and producing virtually everything, save the Textron Lycoming four-cylinder engine and propeller, in-house. By contrast, competitors like Cessna typically outsource 40% of their parts.

There has been turbulence along the way. Because of a drop-off in sales due to 9/11, Champion will probably net only $350,000 this year on sales of $7.2 million. The Mehlhaffs, who each own half of the company, separated in 1992 and divorced in 1996, putting strains on the operation.

These days each runs a different side of the business—Charlene, 58, does the books; Jerry, 60, runs the factory and test-flies the planes. "We are partners," says Charlene, who stands a head taller than Jerry. "If there are disagreements and we can't work it out, we go out in the parking lot," she jokes. "Having a brown belt helps."

Fixing the Champion brand called for a different kind of discipline. Both pilots, the Mehlhaffs bought the former Champion Aircraft for $400,000 in bank loans back in 1988 for salvage—14 rail boxcars of parts, dies and machinery, along with FAA certificates approving the airworthiness of the original two-seater design. The parts business raised enough cash to start updating aircraft models. Plowing $1.7 million in loans and savings into buildings, tools, dies and welding equipment, the couple began production in 1991, delivering 14 planes and netting $125,000 pretax on sales of $1.2 million.

Today production hangars sit along an airstrip on a 300-acre farm in Rochester, Wis. Inside, nonunion welders, paid $1 to $19 an hour, fashion a fuselage out c high-carbon steel for the planes, whic come in five basic models. A lightweigh Dacron, spray-painted to a high gloss, cov ers the body. The finished plane is ex tremely light—1,200 to 1,600 pound (empty), compared with a Cessna 4-sea 172 Skyhawk at 1,620 pounds—and ca be wheeled out of hangar by two people.

About 90% of a craft 3,000 parts are molde and machined at Amer can Champion. That wa the Mehlhaffs save at lea $30,000 per plane. Jer recently dumped a sup plier charging $8 a foot f fabricated steel used f wing struts; he now bu the steel (59 cents a foo and processes it himse for a total cost of $2 a foo

Making their ow parts has allowed t Mehlhaffs to add in provements popular wi pilots. Among the powder-coated steel in t wings and fuselage to pr vent corrosion and me wing spars instead wooden ones. Optio like fancy navigation ele tronics, larger fuel tan leather seats and vacuu pump fuel systems c add 50% to the base pri But even a fully load $150,000 craft is s $100,000 less than so comparable single-pro

Price helped sell Rh Grotzinger, a North Carolina telecom ecutive and a typical Champion buyer. liked the fact that his $120,000 Citabria plorer costs less than $2,000 to insure a is relatively easy to maintain. T Mehlhaffs' planes recall "a time when ing was a lot more simple," s Grotzinger, who visited Rochester to sel his model. "It's sort of like going to the f niture store and picking out your couc he says. Only this furniture levitates.

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# SIGNS OF LIFE

## The legendary maker of the Frisbee and Hula Hoop is trying to make a comeback.

BY DIRK SMILLIE

Boogie woman: Wham-O Chief Mojde Esfandiari.

RUNNING A TOY COMPANY REQUIRES more than a few hands-on skills. Just months after becoming Wham-O's chief operating officer, Mojde (pronounced "MOISH-ta") Esfandiari was down on her hands and knees, grappling with her first crisis.

Furious customers had returned thousands of defective Slip 'N Slide water chutes. "When I saw the profit-and-loss statement for that category, I almost became suicidal," she recalls. So she summoned the operations guys into her San Francisco office—later moved across the bay to Emeryville—and scrutinized every inch of the 22-foot water slide, whose perforated seams, they discovered, could easily separate. Esfandiari recommended production changes, including the use of stronger PVC that could be heat-sealed, not stitched. The quick action helped revive sales—and win her the job of Wham-O's chief executive in 2000.

That's been the easy part of trying to revive a 54-year-old legend. Founded by best friends Richard Knerr and Arthur (Spud) Melin, who sold homemade slingshots out of a garage, Wham-O went on to peddle some of the world's most popular toys, including the Frisbee, Super Ball and the Hula Hoop, which by 1960 became the first toy ever to sell 100 million units.

But the company went into virtual suspended animation after being bought by Kransco, an investment firm, for $12 million in 1982—and nearly died of neglect when Mattel acquired Kransco in 1994. "In a company where Barbie is queen, it was hard to sell Super Balls," says the Iranian-born Esfandiari, 46, who joined the company in 1997 as chief financial officer.

And it's still tough today—five years after Mattel sold Wham-O to the Manhattan-based venture firm Charterhouse Group and a bunch of investors for $20 million. Through the first nine months of 2002 the company claims it netted $2 million on sales of $40 million. Esfandiari's goal is to turn it into a $250 million all-season toymaker in three to five years.

So far, though, she has been equal parts builder and demolition expert. In 1999 she eliminated a series of unprofitable products and ended unprofitable deals with retailers, causing a $10 million dip in revenues. "It was painful medicine," she says. And so were the reports from Target, Wal-Mart, Kmart and the Sports Authority. Their beef: Wham-O's poor record in shipping and quality. (Retailers complained that four in ten Slip 'N Slides were being returned.) Esfandiari says she has improved the company's overall rating with retailers who keep scorecards on vendors based on shipping reliability and inventory in stock. Frequent travel abroad has helped generate sales in places like Germany and Australia; foreign sales this year have brought in 17% of revenue, up from 4% three years ago, but still half what Mattel and Hasbro achieve overseas.

Wham-O is banking much of its future growth on cold weather and on the fact that 40% of all toy sales occur in the last six weeks of the year. Thus the company rolled out a line of winter products for the first time last year, including racing sleds and a colorful group of "Snowboogies"—foam boards that skid along the snow.

Thanks in part to a long winter, sales were brisk, and should add 15% to the top line this year. The September acquisition of the winter and summer product lines o Redmond, Wash.-based Earth & Ocean should boost next year's sales by $15 million, says Paul Mullan, vice chairman a Charterhouse.

But it's still hard to turn a buck. Com petition comes in all sizes. And whimsica products breed capricious buyers. "Adult drive the same BMWs for 20 years," say Mullan. "But kids want a new toy every tw months." Reaching out to girls may help Last year it sold 1 million units of its $2 Baskin-Robbins ice cream makers an Gummimakers.

What the company needs is a stron dose of marketing hype from the ol days—not just upping the ad budget, 7 to 10% of sales, but returning to the anti of Knerr and Melin. Their proxies onc dropped a giant Super Ball from the top a 23-floor hotel in Australia. It bounce back up to the 15th floor—then fell crush a convertible parked nearby.

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# Analyze This

Mad money. Josef Lakonishok mulls how to best panicky souls

Josef Lakonishok says stock prices are driven by gut-wrenching emotion that smar investors can exploit. Eugene Fama says an efficient market governs prices, which mean stock picking is a cruel illusion. When both invest, who does better? | BY SETH LUBOV

THEY ARE THE YIN AND YANG OF INVESTING—TWO academics with renowned and diametrically opposed theories on how stock prices are set. Eugene Fama is the coauthor of the efficient market theory, which holds that stocks are accurately priced at any given ne because they reflect all information known to investors; erefore stock pricing is random, and any notion of stock pick-g genius is a cruel illusion.

Josef Lakonishok is a market behaviorist, one of the best-iown of the breed. He argues investors aren't rational at all, iven instead by fear and greed and other elemental emotions. ney are more like a herd of frightened animals, betting with the t instead of the head; this lets better-informed investors ex-oit consequent anomalies.

"The efficient market theory tells you that prices more or less flect the value of the company"—when often they don't, Lakon-nok says. "The Internet bubble, the media telecom bubble," he offs. "How can you explain in a rational way valuations that ade absolutely no sense?"

Lakonishok, 56, and Fama, 63, happen to be tennis fanatics, d even once settled matters on the court. But unlike most ory-tower pontificators, these two have put their theories to e test in the real world. Lakonishok, a finance professor at the iversity of Illinois at Urbana-Champaign, is a partner in LSV set Management, with about $8 billion in assets, which caters gely to institutional investors with its disciplined approach to lue investing. Fama, a finance professor at the University of icago, is a director at the $34 billion (assets) Dimensional nd Advisors. Founded and run by two ex-students, David oth and Rex Sinquefield, it is an admired, if eccentric, manager mutual funds available to the public through fee-only ancial advisers.

While their styles of investing are as different as their acade-ic approaches to finance, both have posted impressive results in fficult times. Though only one of Lakonishok's eight investing ategies is up for the year through Sept. 30, all have handily aten the S&P 500; his flagship large-cap value product has re-rned 13.2% since inception in 1993, compared with 8.6% for e S&P. For Fama, only 2 of DFA's 38 funds have been bested by e S&P 500 this year, and 11 actually are up while the S&P is down % year-to-date. Compare three of the investment strategies at Lakonishok runs with their closest matches among Fama's nds, and Lakonishok's investments have fared better in recent ars—in both bull and bear markets (*see table, p. 164*). Score e for behavior theory.

Lakonishok and the co-owners of LSV (the "S" is for Har-rd's Andrei Shleifer, and the "V" is the University of Chicago's Robert Vishny) are cashing in nicely. Lakonishok is the second-largest individual owner of LSV, which posts an eye-popping annual net margin of 74% on revenues of $31.2 million—and a net margin of 76% in the most recent quarter. (Much to Lakonishok's irritation, the dazzling figures are disclosed in public filings by LSV's 44% owner, SEI Corp., a fund administrator.)

Such success has provided Lakonishok (and Fama, for that matter) with a lifestyle that is the envy of his tweedy peers. Lakonishok enjoys frequent trips to Chicago to attend the opera and, fittingly, to watch the Bulls and the Bears (pro basketball and pro football, respectively). Fama, when he isn't lecturing at the University of Chicago or speaking at seminars for DFA investors, spends the rest of the year at a second home near the beach in Los Angeles' pricey Pacific Palisades area, where he indulges his passion for windsurfing several times a week. When he is needed at the seminars or to attend to his duties as a director, Fama stops by the plush headquarters of DFA, which overlooks the Pacific Ocean in nearby Santa Monica.

But the similarities between them end there. These days Fama and his efficient-market acolytes are "out," and Lakonishok and the behavior bunch are "in" after years of toiling in the academic wilderness. Last month Princeton professor Daniel Kahneman, whose early theories about the link between psychology and economic decision making formed the basis of much of behavioral finance, was awarded the Nobel economics prize. One of last year's winners, George Akerlof of the University of California at Berkeley, cited behavioral finance in his acceptance speech in criticizing the laissez-faire belief in markets as having contributed to the stock bubble.

That notion dogs Fama, who first proffered the efficient market theory in 1966. To critics, efficient market theory beguiled investors in the 1990s into overconfidently thinking that the balloonlike multiples they paid for profitless dot-coms and shaky telecoms were rational. "You'd have to have an extraordinary disregard of history to conclude that the market is efficient," harrumphs longtime market contrarian and money manager Jeremy Grantham of Boston's Grantham, Mayo, Van Otterloo & Co. "I am in complete agreement with the behavioral approach. The market is driven by many inefficiencies that result from the hardwiring of the species that goes back hundreds of thousands of years."

Wait a minute. If Fama is so wrongheaded, then why does his offspring, DFA, outperform the market? Although DFA believes no one can beat the market over the long term by actively picking stocks, the firm also doesn't slavishly copy the well-known indexes such as the large-cap S&P 500 and the small-cap Russell 2000. Leaning toward value investing, it constructs its own port-

Betting on theory: efficient market guru Eugene Fama, with DFA's David Booth and Rex Sinquefield.

folios based on specific categories, such as microcaps and international value. Large slugs of stocks are swept into the portfolios with little attention paid to the underlying business or analyst research, with the exception of screening out stocks that might be awaiting a takeover, which would remove them from the market. From then on the portfolios are passively managed, meaning very little turnover occurs. That keeps fees down; the average is 53 cents per $100 of assets.

Result: Low capital gains taxes and low fees that are among the big selling points for Fama's babies. Dimensional funds are obviously the wrong place to look for blowout performances. Yet in a stinko market they at least have the distinction o outpacing comparable indexes, if only by a little (se table). The flagship U.S. Small Cap Value is dow 14.7% this year, versus the Russell 2000 Value Index' –15.6%; over five years, the Dimensional fund beat th Russell measure by an annualized 2.7% to 2.1%.

Rex Sinquefield, a Fama disciple who is a cofounde of DFA, says the rival behaviorist theory isn't even "on coherent theory. It's sort of a whole bunch of ad hoc the ories used to explain a lot of ad hoc empirical observa tions. And those various theories are not reconcilable. Lakonishok almost allows as much. "I don't want yo to think there is anything magical about behavioral fi nance. It's more of a buzzword. To me, it's basically collection of market anomalies," Lakonishok says.

For all their public potshots at each other's thec ries, both Fama and Lakonishok agree that value stock provide stronger returns over the long run. Fama's the ory holds that value stocks, however, carry high risl Lakonishok sees lower risk there because beaten-dow stocks are underappreciated by irrational investors.

Lakonishok first screens out the stocks that are chea for a reason, such as companies that are on the precipi of bankruptcy. It's okay if they're in trouble or they ha disappointed investors, but they must show signs life—momentum in earnings or in stock price. Lako ishok also looks at 15 or so old-fashioned value indic tors: cash flow to price; book to price; sales to price; dividend price and so on. The secret sauce in his model comes from ho much weight is attached to each measure, and diversificatio With few exceptions, no one stock makes up more than 1.6% the portfolio, while no single industry makes up more than 3 relative to the weight in the corresponding benchmark. Stoc that have been public for less than two years also are ruled out.

Among large-cap stocks, Lakonishok fancies a collection th could charitably be called eclectic. He likes Astoria Financial, t $22 billion (assets) thrift, for its low price-to-earnings multiple 9.5, its 3.08% dividend yield and recent share buybacks. He favc Bank of America, with a P/E of 14 and di idend yield of 4%. He also likes Papa Joh International, the 2,782-store pizza chain not for the so-so pizza, but for share repu chases, pricing momentum and prior i vestor disappointment. Betting agains crash in home prices, he also likes Lenn Corp., the Miami-based home builder w a P/E of 8 and revenue growth through t year of 15% ; it sells for $57.

"These companies aren't as bad as t market thinks they are," says Lakonish "We don't visit companies, and we do talk to analysts. In essence we are pi ing stocks, but we do it using a quanti tive model." Sounds like a very practi take on investing.

## From Theory to Practice

Lakonishok's behaviorist LSV beats Fama's efficient market DFA when comparing the two sets of portfolios with the same styles. Both sides outdo market indexes.

| Fund | TOTAL RETURN[1] year-to-date | 3-year annualized | 5-year annualized |
|---|---|---|---|
| DFA U.S. Small Cap Value | -14.7% | 6.8% | 2.7% |
| LSV Small Cap Value Strategy | -4.8 | 13.7 | 7.4 |
| Russell 2000 Value Index | -15.6 | 6.3 | 2.1 |
| DFA U.S. Large Cap Value | -19.9 | -1.5 | 0.9 |
| LSV Large Cap Value Strategy | -16.1 | 1.5 | 3.2 |
| Russell 1000 Value Index | -22.7 | -6.3 | 0.3 |
| DFA International Value | -13.9 | -8.8 | -2.5 |
| EAFE Index[2] | -21.0 | -14.6 | -5.7 |
| LSV International Value Strategy | -4.1 | -2.2 | NA |

[1]Through Sept. 30. [2]Morgan Stanley Capital International Europe, Australasia, Far East Index. NA: Not Applicable.
*Source: Lipper, Inc.*

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Damning convention, she opts for Dr. Seuss as a decorating motif.

# Crisis Investing

**Troubles in Latin America, says investment banker Violy McCausland, make this exactly the time to invest there.**

BY DYAN MACHAN

BESET BY BANKING CRISES, LAWlessness and left-wing politicians, Latin America today isn't exactly El Dorado, the lost City of Gold that so fascinated the explorer Coronado. But to Violy McCausland, now is exactly the time to buy Latin American stocks. She sees bargains scattered like gold nuggets throughout this rough terrain.

Going against the conventional comes easily to McCausland, president of New York investment banking firm Violy, Byorum & Partners. She brashly derides her former employers at J.P. Morgan, where she headed Latin American mergers and acquisitions, as "Communists" for their deadening conformity. She is unapologetic about her exit from that firm: She left in 1993 after privately borrowing money from a Morgan client, a conflict of interest. (She says the firm, put off by her maverick style, wanted her out anyway. From 1987 to 1993 her group drove $300 million in fees.)

McCausland, 48, Colombian-born and partial to brilliantly colored caftans, has a good track record in figuring out how to score in Latin investing. Since forming the firm in 1996 with Citicorp veteran Stormy Byorum, her shop has advised on deals totaling $13 billion, netting $200 million in fees. One early coup: persuading the Cisneros family of Venezuela to shift its soft drink bottling affiliation from PepsiCo to Coca-Cola.

"The conventional view is Latin America is in crisis, so there is no opportunity," she says, sitting at her desk and backed by a Dr. Seuss mural. She sees an abundance of opportunity there. While financial giants like Morgan and Goldman Sachs are in retreat in Latin America, Violy, Byorum built offices in Brazil and Mexico just last year.

McCausland isn't a stock picker, but her perch as an investment banker in the region provides keen insight into promising, undervalued companies that should rebound in better economic times *(see table, p. 168)*.

And are they ever cheap? Almost without exception, the companies trade at far lower multiples than their U.S. counterparts—and below the S&P 500's earnings multiple of 28. McCausland likes Peruvian cementmaker Cementos Lima, trading at a tiny trailing price/earnings ratio of 1.4; LaFarge North America, the Herndon, Va.-based cement company, trades at 8 times earnings.

She also likes Mexico's Coca-Cola Femsa, which has widened its profit margins and has a mere 13 P/E. Atlanta-based Coca-Cola Enterprises, the world's largest Coke bottler, has a 30 P/E.

Even in war-torn Colombia, she argues, certain regions and industries are booming. Almacenes Exito, the Wal-Mart of Colombia, is expanding into Venezuela. Colombia's Bavaria, a beer company, is moving into Panama and

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Peru. Nacional de Chocolates, the confectionery company, will be selling its sweets in Central America. All have strong brands. Colombia itself is a good place to invest, she says, despite its enormous murder and kidnapping problems. Her rationale: "There are parts of the Bronx you wouldn't go to and people still do business in New York."

Note how almost all the stocks in the table are off their 52-week highs. A couple can be purchased as American Depositary Receipts—Coca-Cola Femsa and Mexican cementmaker Cemex. The rest can be bought through a stockbroker, who can buy on foreign exchanges.

Buying these issues is a contrarian play. Despite the cheap prices, merger-minded multinationals are avoiding the region, says Brian O'Neill, chairman of J.P. Morgan Chase's Latin American investment banking unit. The same goes for buyers of individual Latin securities: Outside investment volumes in Latin America reached $1.5 billion per day in 1997, but have since slowed to a $300-million-per-day trickle.

The only Latin American country McCausland is wary of is Argentina, now suffering from a crippled banking system. That tax-laden, bureaucracy-heavy country is in the fourth year of a painful recession made worse by a freeze o withdrawals from savings accounts. Thi has driven out foreign bankers an squelched the business and consume lending that the once well-functionin economy needs. "Argentina had every thing, but the people were arrogant," sh

## Latin Rhythm

McCausland likes the good, cheap stocks that abound in the region.

| Company/industry | Country | PRICE recent | PRICE 52-week high | P/E |
|---|---|---|---|---|
| **Almacenes Exito**/grocery stores | Colombia | $1.13 | $1.71 | 10.3 |
| **AmBev**/brewing | Brazil | 11.34 | 21.20 | 17.0 |
| **Backus**/brewing | Peru | 0.99 | 1.02 | 2.0 |
| **Bavaria**/brewing | Colombia | 3.15 | 3.91 | 15.6 |
| **Cementos Lima**/building materials | Peru | 12.69 | 14.40 | 1.4 |
| **Cemex**[1]/building materials | Mexico | 20.00 | 33.00 | 5.8 |
| **Coca-Cola Femsa**[1]/soft drinks | Mexico | 19.91 | 29.89 | 13.1 |
| **Gerdau**/steel | Brazil | 0.01 | 0.01 | 6.2 |
| **Minsur**/mining | Peru | 1.16 | 1.18 | 11.9 |
| **Nacional de Chocolates**/confections | Colombia | 2.89 | 3.02 | 13.1 |

[1]Trades as American Depositary Receipts.
*Sources: Worldscope via FactSet Research Systems; Bloomberg; Violy, Byorum & Partners.*


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says of the nation's leaders.

Still, McCausland has few qualms about some of the leftist Latin politicians who have come to prominence. "Unlike Argentina, Venezuela is the easiest country to fix," she argues. Vast resources in mining and industry make it a good long-term bet, she contends. She shrugs off Venezuela's socialist leader, Hugo Chavez, who is known for populist antibusiness policies that have slowed growth and sparked job walkouts. "Like the mumps, Chavez will go away," she says. Chavez's term is up in two years, and McCausland believes his successor will be more business-friendly.

"The time to invest is when things are out of order. If you wait for the next election, you'll pay," she adds.

In Brazil, Latin America's largest economy, financial markets and the currency, the real, have both tumbled, leading up to left-leaning Luiz Inacio Lula da Silva's majority showing in the recent presidential election. He is strongly favored to win an Oct. 27 runoff. A big concern is that he may give up the fiscal discipline imposed by outgoing Fernando Cardoso that is needed to service Brazil's $258 billion foreign debt and keep virulent inflation under control.

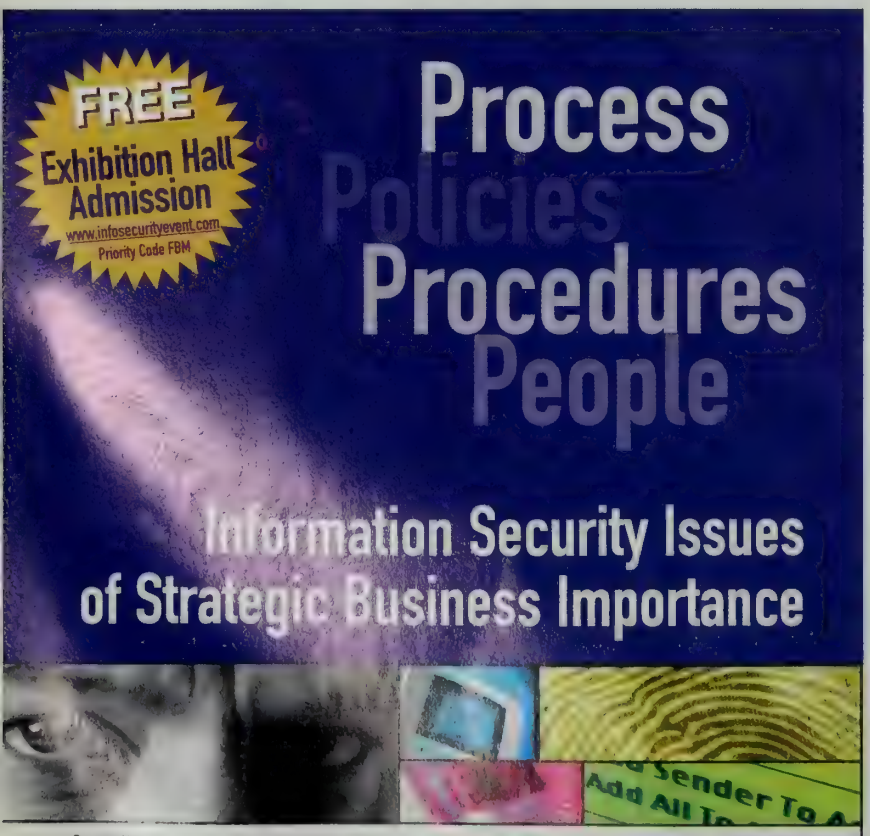
**"Lula is saying privately HE WANTS TO WORK WITH WASHINGTON."**

McCausland, however, suspects that da Silva will govern as a moderate. "Lula is saying privately that he wants to work with Washington and strengthen investment ties to the U.S.," says McCausland. Brazil remains a productive engine with a motivated work force. Brazil also has 200,000 M.B.A.s, she says. "Of course, I do not know if that is good or bad."

McCausland herself doesn't hold an M.B.A. At Morgan she ran into a starchy M.B.A. mentality that she finds distasteful. Like most banks, Morgan values teamwork, discretion and a British sense of decorum. Her ways clashed with its culture, to say the very least. McCausland loves the limelight and adores the creative turbulence of phones ringing and people panicking. "She thrives in tough, crisis-type situations," says Lorenzo Zambrano, chairman of Cemex.

In her Morgan days McCausland thought nothing of hiring a private jet to whisk her team to client meetings and holding lavish parties with champagne and caviar, all in the name of doing business. She once brought in a mariachi band to serenade her staff amid Morgan's hushed halls.

You can see why this freewheeling type prefers running her own business. Says James Robinson, chairman of Violy, Byorum and former chief of American Express: "She's the classic entrepreneur." F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# Makers & Breakers

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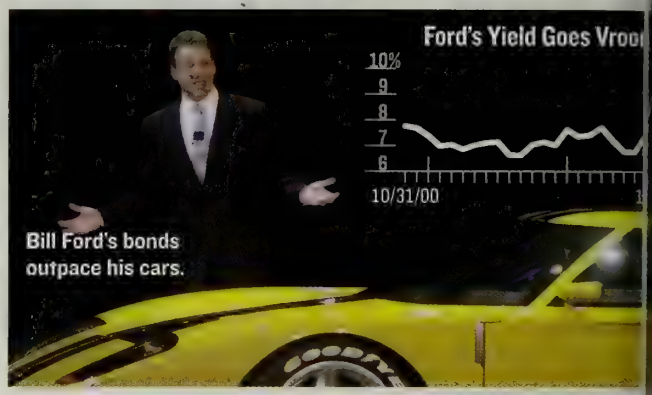
## Drive, He Said

WILLIAM CLAY FORD JR. DOES A GOOD JOB AS A GENIAL TV pitchman but has a harder time getting the family business to run as well as the "Ford tough" trucks he touts. **FORD MOTOR (F)** lost $5.5 billion in 2001 and $850 million more through Sept. 30. Despite the costly buyers' incentives Ford offers, market share is eroding, and there's only a trickle of new cars and trucks in its pipeline until 2004. A plan to reap profits from luxury brands looks like a flop: Jaguar will lose $500 million this year. And Ford's pension kitty is underfunded by $10 billion.

Ford's stock has dropped 50% to $10 from its 52-week high a year ago. Given the economy's shaky condition and Ford's weaknesses, the share price likely will take a while to recover. A better idea: Buy Ford bonds. The automaker's balance sheet is sound, and it has plenty of cash to pay interest. Yes, Standard & Poor's just put Ford on credit watch, yet the likely one-notch downgrade to BBB would still leave it investment grade. Dire views of Ford's future, says S&P auto analyst Scott Sprinzen, are "irrational."

A good bond to buy is the 7⅞ Ford Motor Credit issue, due



Bill Ford's bonds outpace his cars.

2009. You'll capture a nice yield. This $5 billion issue has see yields climb rapidly, from 7.1% a year ago to 9.7% now *(se chart)*. That's double Ford's stock dividend yield. The bond ha a near-junk spread to the comparable Treasury—six percentag points. It is noncallable and trades at a substantial discount t face value. So hold the bond to maturity for nice returns, or i the company's condition improves between now and 2007 an its bond prices rise, you could lock in a tidy capital gain b selling early.

*—Jonathan Fahe*

## Class Act

IN A BAD ECONOMY the jobless go back to school. That is why educational stocks are up an average of 28% this year. But **DEVRY (15, DV)** is a painful exception. It's down 56% from its 52-week high in March. And it's a good buy.

DeVry, a holding company for DeVry University and Becker Conviser Professional Review (which preps accountants and financial analysts for exams), emphasizes high-tech careers, so much of its decline is cyclical. Two years back, when tech was sexy, the company's stock hit a high of $41 per share. Student enrollments are off this year, but computers aren't going away. The firm, which offers bachelor's and master's degree programs at 76 campuses and learning centers, has no debt and trades at a decent 16 times trailing earnings. Alexander Paris Jr. of Barrington Research Associates expects to see earnings growth return to its customary 20%.

*—Emily Lambert*

## For the Long Haul

LIKE CARS, THE HEAVY-TRUCK INDUSTRY has been in a slump. Orders at companies like Paccar—maker of Peterbilt and Kenworth tractor trailers—are down over the last three years. But that's about the time a truck takes to wear out, meaning the industry is nearing the beginning of a replacement cycle.

In this group **PACCAR (44, PCAR)** is the best buy right now, says Larry E. Baumgartner, manager of the One Group Small Cap Value Fund. With a strong balance sheet that includes $670 million in cash, Paccar is a well-run leader in the industry (its 24% U.S. market share is second behind Freightliner's 37%).

Baumgartner says that as the replacement cycle hits its stride Paccar will double earnings per share from $2.15 this year. Paccar trades at a price/earnings ratio of 21.

*—Christopher Helman*

## Transaction Denied

EFUNDS LOOKS LIKE A GOOD, CHEA tech stock (P/E, 12)—but it isn't. **EFUND (9, EFDS)** is a major player in electroni transaction processing and automated teller outsourcing. Earnings dropped just 1% in the first half, to $12 million, despite a bad time for tech and the finance industry.

But Efunds recently lost a contra worth $19.3 million, 7% of its first-ha revenue. Worse, the four acquisitions made last year haven't helped, as revent in the first half rose just 1%. Also, Efund second-quarter earnings would ha fallen more than the reported 50% ha the company not drawn down $5.5 mi lion from its reserves for receivables an employee compensation. Without th infusion, the company would have had loss for the quarter.

Short it and cover at $5.

*—Elizabeth MacDonald and C.l*

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# The P/E Myth

CAN YOU PREDICT WHICH WAY THE MARKET IS headed by looking at the average price/earnings level? Some investors think that you can—or at least, that you are likely to do well buying when the ratio is low and selling when it is high. I have evidence to the contrary. The P/E level is useless for market timing.

But first, why do we so believe P/E predicts the future? It appeals to human senses of nature, fairness, value and simplicity. We believe, wrongly, that the supply and demand for securities follow the same curves as the supply and demand for petroleum or corn. ("I'd buy more of anything if it were cheap.") The truth is that demand for stocks is not in some neat inverse relationship to the price. On the contrary: It's when stocks are already high (as in 1999) that buy orders flood into Merrill Lynch and Schwab.

**There is no linkage of market P/Es to subsequent returns—no matter how you measure the ratio and no matter over how long (up to five years) you measure returns.**

There's an emotional component to the belief that buying into low-P/E markets leads to success. When we buy "cheap" and are rewarded with rising prices, we feel smart and deserving of the capital gain. The fellow next door who paid up looks like a gambler and not deserving of a reward. Perhaps investors are afraid of high-P/E markets because of instinct. For eons only those with a healthy fear of heights passed on their genes while the daredevils did not. But that fear of heights shouldn't dictate your willingness to [illegible]ities.

The thesis that stocks should be sold when P/Es are high is wrongheaded, for two reasons. First, the data don't support the thesis. Second, finance theory denies it.

In an article in the fall 2000 *Journal of Portfolio Management*, Meir Statman, a Santa Clara University finance professor, and I statistically showed that there is no linkage of market P/Es to subsequent returns in the market. This is true no matter how you measure the ratio (for example, above a random number, like 20, or in the top 20% of history) and no matter over how long (up to five years) you measure returns. The conclusion is based on 125 years of data. For every instance in which high-P/E markets do badly or well, however determined, there is an almost identical number and magnitude of times they did the reverse. Low-P/E markets lead to bad

results as often as good ones.

Recently we did further research on the disconnection between average P/Es and buying opportunities. Make any P/E trigger you want—buy when it's below 20 and sell when it's above, or buy below 8 and sell above, whatever—and you won't wind up with a trading rule that works. Vastly more often than not, you'll wind up with a return that badly lags buying and holding. Why? You'll be out of the market for crucial rallies, and you will not be spared all of the corrections. With a trigger of 25, for example, you'd be out of the market in 1922 (when the market was up 28%) and in the market during all but four of every money-losing year ever. An analysis of returns in the U.K., another market where historical data go way back, delivers the same result: P/E triggers don't work.

Finance theory also undermines the case for letting average P/E levels dictate your preference for stocks over fixed income. Stocks compete with bonds by offering an ever-varying "equity risk premium." If this premium were fixed, you could devise a target earnings yield on stocks. Flip that earnings yield, or E/P, and you would get a target P/E, and you could argue that stocks are "cheap" when they go below this P/E, expensive when they are above. The problem here is that the equity risk premium is driven not by some fixed mathematical formula but by shifting emotional preferences for or against uncertain earnings (with potential opportunity) versus safer fixed-income flows. In short, investors' moods throw simplistic E/P rules out the window.

The very fact that people are worried about high P/Es suggests that the mood is about to shift in favor of equities. The not-quite-50% decline in stocks over the past two and a half years has wrung a lot of risk out of the market. You can now get some great long-term buys in companies like these:

Specialty retailer **Gap** (**10, GPS**, www.gap.com). Insurer **Hartford Financial Services** (**49, HIG**, www.thehartford.com). Consumer finance specialist **Household International** (**28, HI**, www.household.com). Bank and money manager **Mellon Financial** (**28, MEL**, www.mellon.com). Scandal-plagued but ever powerful **Merrill Lynch** (**39, MER**, www.ml.com). Food retailer **Safeway** (**24, SWY**, www.safeway.com) or its foreign counterpart **Royal Ahold** (**15, AHO**, www.ahold.com). Semiconductor stalwart **Texas Instruments** (**17, TXN**, www.ti.com) and auto giant **Toyota Motor** (**50, TM**, www.toyota.co.jp).

Forbes.com | Kenneth L. Fisher is a Woodside, Calif.-based money manager. Visit his home page at www.forbes.com/fisher.

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Financial Strategy By A. Gary Shilling

# Junk Dividends

AS LONGTIME FORBES READERS KNOW, I HAVE BEEN A bull on Treasury bonds since the early 1980s, and they have been big winners. But my enthusiasm for bonds has always stopped with Treasurys. I have been especially leery of junk bonds, which are aptly named. Well, I have changed my mind and I'm ready—almost—to plunge into the wild world of high-yield paper.

Before we get into that, let's look at the case against junk bonds. They obviously are doing poorly of late. High-yield-bond mutual funds lost 3.5% last quarter as junk spreads over Treasurys jumped to new highs. And junk has been in trouble for a long time. This stuff first went south in 1998 during the Russia default and the collapse of Long-Term Capital Management. The towering yields on junk (average: 13.5%) seem alluring but are less than reassuring when you look at the towering default rate, now 10.1%.

**Think about buying high-yield bonds—despite the likelihood that they will keep on doing poorly. Consider them as stocks with big—but risky—dividends.**

Also, don't be lulled by thoughts that the worst is over for junk. It isn't. The problems simply will move to another corner of the high-yield terrain. A lot of the trash has been cleaned out, yet more remains. Junk issued by telecoms and other tech outfits in the late 1990s are now history or are seasoned enough to survive. There has been a bracing $142 billion in defaults over the last four years. A striking 59% of wireless telecom issuers have already defaulted.

Next to be hit will be nontech junk—from autos, appliances, basic materials and other old-style industries. Why? Another recessionary downturn is likely as consumers retrench under the burden of mounting stock losses, concerns over corporate malfeasance, continuing layoffs and fear of war with Iraq. Renewed economic weakness will break the housing bubble (*see my Oct. 14 column*). The tech-led dip we have suffered was simply a prelude.

How, then, could I possibly have any interest in junk bonds? By thinking of them as equities paying lush, although uncertain, dividends. The junk market has long tracked the stock market, more than the bond market. Junk bonds' prices depend primarily on quarter-by-quarter earnings and operating income (net before interest, taxes and depreciation). When these measures flag, both junk and equity prices do,

too. In contrast, investment grade bonds have plenty of cas flow to cover their interest pay ments. Their prices are les volatile and hinge much mor on Treasury yields (*see Marily Cohen's column, p. 178*).

Martin S. Fridson, chi high yield strategist at Merri Lynch, and his team develope a statistical model that explai junk-bond spreads over Tre sury yields. The Merrill team examined macro influences li the money supply and likely economic growth, and also t Consumer Price Index, since deflation kills producers' pricir power and crimps operating income. The factors that Fridsor group found to drive junk spreads resemble those powerir high-dividend stocks: their ability to continue nice payouts.

Is junk risky? You bet. Note, however, that if things go bad with a junk-issuing company's income stream, at least bor interest is payable before dividends on preferred and comm stock. And if the company slides into bankruptcy, you may g something of your principal back from a bond, and seldo anything from a stock.

As explained in my May 27 column, meaningful divide yields are back in style. They assure investors in the post-Ande sen world that earnings and cash flow are real. Also, I forese long stretch of low stock appreciation, so investors will be hu gry to get meaningful stock dividends. That's why more a more companies will return to offering the dividends th spurned in the appreciation-driven 1990s.

Still, I'm walking, not running, to junk. Before jumping I'd like to see more investors waking up to junk as quasi-equi Movement in that direction is occurring. Individual invest are beginning to act that way. While money has been flowi steadily into investment-grade bond funds for two years, it h been hopping in and out of junk funds much like stock fu flows. Some hedge funds own junk and trade it with the z they have for trading equities.

Another thing I want to see is the end of this wrongheac notion that the junk default rate is going to tumble and t spreads versus Treasurys will narrow. Then default-adjus yields will truly be attractive. The investor's task will be to a lyze which junk issues with alluring yields stand the b chance of continuing to pay interest, just like fat dividend-p ing stocks. Otherwise, buy a basket of junk issues or ju mutual funds to spread default risks.

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A. Gary Shilling is president of A. Gary Shilling & Co., economic consultant and investment advisers. Visit his home page at www.forbes.com/shilling.

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# Watch Your Step

INVESTMENT-GRADE CORPORATE BONDS OFTEN DON'T PAY enough over supersafe Treasurys to make them a worthy risk, and corporates carry an extra burden: ratings downgrades. Lately a spate of ratings demotions have rocked the bond world, forcing corporate bond investors to suffer silently as prices fall and credit quality deteriorates.

One solution: Buy corporate step-ups. These bonds pay a higher interest coupon when a downgrade occurs, typically rising by a quarter of a percentage point—decent compensation for assuming the extra risk of owning a corporate bond. All it takes for an interest step-up to occur is for one of the two major agencies, Standard & Poor's and Moody's, to act. So if an S&P rating goes down two notches from BBB+ to BBB-, you get a half-point of extra interest. And if Moody's follows suit, you get another half-point. Total: a full point extra in your pocket.

**Did S&P zap your bond's rating? Try corporate bonds that pay higher interest when they suffer a downgrade—good insurance in shaky times.**

Step-up bonds, alas, work the other way, too: If the ratings agencies upgrade an issue, the coupon will decrease. But in today's shaky business climate, rest assured that there's little danger of that occurring soon. Moody's says it has issued 5.5 credit downgrades for every upgrade this year, twice the level of a year ago.

Although they have been around for years, step-ups are pearing more frequently these days, even among investment-grade credits. Why? Slumping revenues and operating earnings—that's net before interest, taxes and depreciation—make selling new bond issues tough. Capital-needy companies have to offer investors step-up insurance to get their issues sold.

Of course, in suggesting step-ups we're assuming a rating downgrade doesn't lead to a default or bankruptcy, where you would receive no coupon payments and would be lucky to settle for getting a fraction of your principal back. And even when downgrades don't presage such catastrophes, they often have unwelcome side effects. A downgrade can end up forcing a company to pay back bank loans early, long before maturity. Among other miseries, a downgrade also can cut the issuer off from the commercial paper market, allow a debt holder to put bonds back to the company for cash and force a renegotiation of bank borrowings—a bigger

interest burden for the com pany. And these horrors typ cally happen exactly at the tim the company is in a weakene financial condition.

That's why I'd stay wit investment-grade step-ups an buy high-grade junk only on spot basis. You want bonds th stand a better chance of weath ering storms and stickir around. Your primary concer should be whether the company can pay the coupon.

What to buy? Good old AT&T is a perfect example of a con pany that, I believe, will muddle through its financial problem Yes, revenues are off and profits are but a memory; yes, hung competitors are legion and phone rates are dropping. Regar less, it remains the largest long-distance company and h ample financial resources to soldier on through tough times.

AT&T has a $1.5 billion issue, 6.50% due Nov. 15, 2006, th was downgraded two notches to BBB-, just north of the gre investment-grade-junk divide. Even when the deal sellin AT&T's cable operations to Comcast is complete, the 2006 bon will be "money good," as we say in the bond biz. You'll keep g ting your interest payments from Ma Bell.

Because of the downgrade, the coupon steps up on Nov. from 6.50% to 7%. So buy now. The bonds recently traded at ($970 per $1,000 face value) for 7.9% yield to maturity. Od are that the ratings agencies will downgrade again, juicing yo interest income further.

Similarly, British Telecom has a $3.1 billion issue due D 15, 2005. When Moody's downgraded the issue last year, t coupon stepped up a quarter-point to 7.875%. These bonds s at a premium with the yield to maturity of 4.5%—2.5 perce age points better than the comparable Treasury. That's attr tive with Treasury yields at their lowest in decades. But I susp another downgrade is coming. The British Telecom bonc now listed as A- by S&P and Baa1 by Moody's.

An example of something to avoid is Gap Stores, a ju credit. I give this long-suffering company only a 50% chance avoiding Chapter 11. (There are other companies in Ga predicament, but they don't necessarily have step-up bonc The clothing retail chain has too many stores, not enough m chandising sense and has lost its marketing edge. Gap's 8.1 step-up, due Dec. 15, 2005, already has been downgraded a now bears a 9.9% coupon. Any future step-ups will be no co fort if it tanks.

Forbes.com | Marilyn Cohen is president of Envision Capital Management, Inc., a Los Angeles f income money manager. Visit her home page at www.forbes.com/cohen.

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# No Greenback Crash

THE DOLLAR'S EXCHANGE RATE IS JUST ANOTHER market price. It freely adjusts to buyers' and sellers' expectations about conditions here and abroad. The euro has climbed from 86 cents in January to parity this summer and now hovers around 98 cents. The yen also has improved, moving from 134 yen to the dollar then to 124 now.

Some people say the Bush Administration should abandon its "hands off" policy and intervene in foreign exchange markets to push the dollar down further, by around 10% to 20%. C. Fred Bergsten, director of the Institute for International Economics, and other Washington cognoscenti want this U.S. intervention so our goods will be more affordable abroad. And imports will be more expensive. This would serve to boost U.S. manufacturing exports and the domestic economy. Yet the chief reason they campaign for a measured U.S. buck-weakening program is to "correct" our growing external deficit and avoid a dollar crash and financial market chaos.

**A weaker dollar? Don't count on it. Look for the buck to appreciate against foreign currencies, especially the euro. Demand for the dollar is always robust.**

The cognoscenti fear a dizzying dollar slide when they see the wide U.S. current account deficit—the difference between the value of the goods and services the U.S. sells abroad and what the U.S. purchases from foreigners. (The trade deficit, which you also hear about, focuses on just the goods.) This year the current account deficit will hit $480 billion, or 4.6% of GDP. Roughly 67% of the U.S. deficit is with Asian countries, 16.5% with western European countries and 15.3% with Canada and Mexico. Luckily the U.S. can cover this gap because it attracts vast amounts of overseas investments in our stocks and bonds. If that money goes away, the worriers warn, the dollar crashes.

Well, no Washington intervention is going to happen. First, Treasury Secretary Paul O'Neill is steadfast in opposing such a move. Second, we don't need one. The dollar is going to strengthen on its own, so why get all excited?

I know, I know, the dollar has been weakening this year. Last summer experts were expecting the euro, then at a buck even, to go to $1.10 by year-end, but the euro has had a tough time returning to even last summer's level.

It turns out that the U.S current account deficit ha been easier to finance than pes simists think. During 2002' first half the current accoun deficit was $242 billion. I addition to that, there was a ne outflow from the U.S. of $4 billion to purchase foreig businesses. These outflows wer offset in large part by th healthy $167 billion that fo eigners spent to purchase our stocks and bonds. They also hel on to greenbacks, stashing them in dollar bank accounts. Fo example, Chinese businesses have been accumulating doll deposits at a rate of $1.2 billion per month this year. Foreig central banks financed the remainder of our external deficit b also piling up dollar reserves.

Asian central banks in particular have been aggressive co lectors of dollar reserves. That's important with Asia accounti for the largest share of the U.S. deficit. The Asian central ban have already added $76 billion in dollars to their war chests th year and by year-end that number will approach $100 billion, 21% of the U.S. current account deficit.

The notion that foreigners will turn away from the doll and U.S. markets is farfetched. The dollar has unique attra tions. It is the world's key currency and the only true intern tional money. Thanks to the dollar's stability, liquidity and lo transaction costs, the U.S. has an edge in attracting capi inflows to finance the current account deficit. The U.S. has a v tually unlimited line of credit into the world's savings pool. A this will not change, despite fretting over American wa accounting scandals and earnings slumps.

The large crop of willing Asian dollar buyers often has a sp cial link to the dollar. Asian countries have a fear of floati Many of them link their currencies de facto to the greenba Accordingly, you can count on their central banks to keep acc mulating dollar reserves if that is what's required to keep th currencies "competitive."

So the dollar isn't going to fall precipitously or even at Against the much-touted euro, the greenback will appreci modestly over the next year. The only things that could thr off my projection for the near term are the risks and uncerta ties that accompany war. After all, foreign private-portfo investments in the U.S. ebb and flow with the emotional c rent, no easy factor to predict. It's no wonder currencies hav nasty habit of making fools out of forecasters.

Forbes.com | Steve H. Hanke is a professor of applied economics at The Johns Hopkins University in Baltimore and a s fellow at the Cato Institute in Washington, D.C. Visit his home page at www.forbes.com/hanke.

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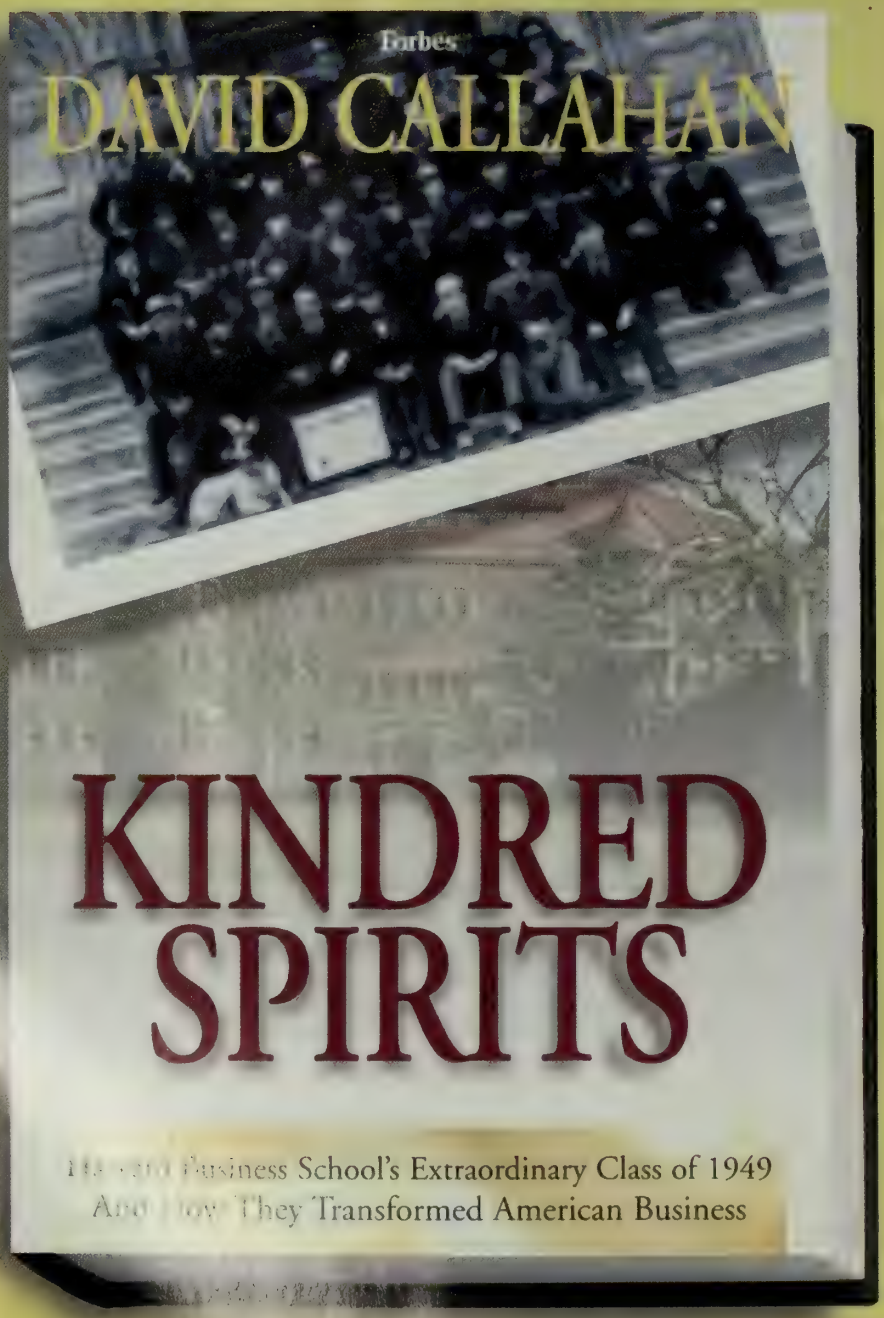


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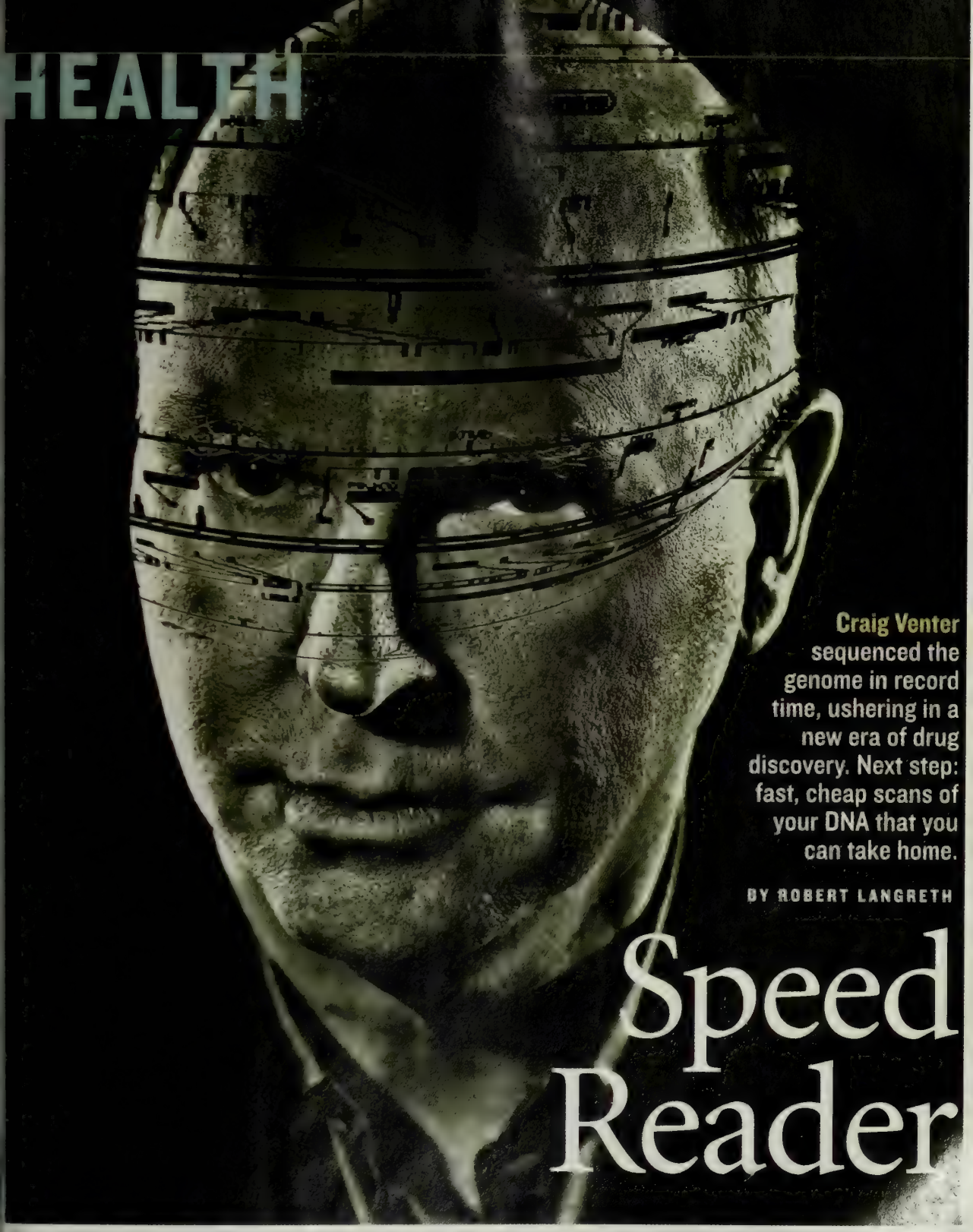


Craig Venter sequenced the genome in record time, ushering in a new era of drug discovery. Next step: fast, cheap scans of your DNA that you can take home.

BY ROBERT LANGRETH

# Speed Reader

**NE GURU J. CRAIG VENTER STUNNED THE** entific world in 2000 when his company, lera Genomics, deciphered the entire man genetic code in just over two years h an R&D budget of $270 million. A nsortium of government researchers k 13 years and spent $2.5 billion to reach the same finish line. (The government says it only spent $300 million on actually sequencing the genome.)

But Venter says even his rapid-fire breakthrough didn't come nearly fast enough. He used 300 high-speed DNA-sequencing machines, costing $300,000 apiece, to map the human genome. Yet Venter dreams of a day, a decade or more away, when doctors will routinely and rapidly churn out the individual maps of thousands of patients, spotting the genetic typos that will cause an array of dysfunction and disease.

The problem: A single sequencer operating around the clock would take at least three years to crank out the raw unordered genetic code of just one person. "There is no way existing machines will get us where we need to go," Venter says.

Now his mission is to get as much human DNA read as fast as possible. Venter left Celera in January and has begun outfitting a new $30 million nonprofit sequencing lab in Rockville, Md., to be funded by government grants and his own foundation. In the next few years he plans to decode the key portions of the DNA of a thousand individuals of various nationalities and ethnic groups, at a cost of about $500,000 each. Donors with the cash to help out are welcome.

Initially Venter will do the sequencing on existing machines optimized for speed, but he has a bigger goal in mind: to hasten the arrival of a new generation of ultrafast sequencers that can read the genome far faster, at far lower cost. Within ten years, he predicts, before a newborn leaves the hospital its entire genome will be burned onto a DVD, which will be given to the parents along with the birth certificate. Every time a new gene is linked to a disease, people will be able to search their genomes using their home PC to learn whether they are at risk and decide what, if anything, to do about it. "I want to make the genomics revolution meaningful to ordinary people," Venter says.

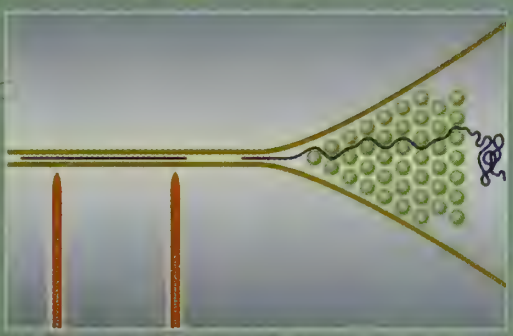
He hopes to jump-start the efforts of a coterie of tiny biotech firms developing high-speed gene-scanners, in the same way that his work at Celera Genomics forced the government's Genome Project to accelerate its efforts. The new startups, including Perlegen Sciences in Mountain View, Calif., U.S. Genomics in Woburn, Mass., 454 Corp. in Branford, Conn. and Solexa Ltd. in Cambridge, England, aim to use recent advances in nanotechnology to decipher mysteries at the amino acid level.

"I use other people's technology to drive the science that I want to do. The science I do, at the scale I've done it, helps, in turn, to drive the technology," Venter says. "It is like working up a ladder." He always has thrown himself into his work: Venter recently revealed that one of the five different DNA samples used by Celera to map the genome was his own.

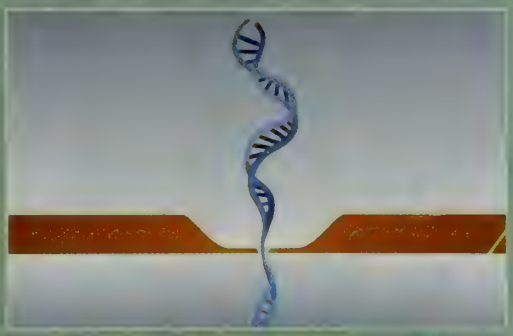
## DNA Decoders

**Researchers are testing a variety of new technologies in the hopes of making cheap, fast genome scans a practical reality in the next decade. Some, such as Perlegen Sciences, use exotic DNA chips to determine genetic differences. Harvard University and U.S. Genomics aim to decipher DNA from scratch.**

Perlegen's DNA chip compares two people's DNA and searches for billions of mutations (shown in yellow).



U.S. Genomics' DNA-handling chip separates and stains DNA molecules so their nucleotides can be "read" by detectors.



Harvard University's DNA detector aims to decipher DNA by threading it through a microscopic hole, or nanopore.

The epochal breaking of the human code was only a start. Knowing the sequence of one genome isn't enough; what matters more is knowing the differences among thousands of genomes. Only by understanding the subtle genetic variations among hundreds of thousands of people—by sifting out the molecular misnomers that predispose someone to a particular malady—will scientists learn how to better predict, diagnose and ultimately cure difficult diseases like diabetes, schizophrenia and heart failure.

In the long term, researchers hope a detailed understanding of the genome's permutations will lead to a new era of customized medicine, in which drug regimens, diagnostic tools and medical devices are tailored to individual genetic codes.

It won't happen without speedier sequencers. Today's dishwasher-size automated machines are technological marvels, made by Applied Biosystems (a sibling of Celera; both are owned by Applera Corp.) and Amersham Biosciences. But their limitations rapidly are becoming apparent.

Most important, they can read the 3 billion letters—A, C, T and G, for the nucleotides adenine, cytosine, thymine and guanine—in the human genome from beginning to end, the way one reads a book. The laser detectors on the machines aren't sensitive enough to see a single DNA molecule. So lab workers must slog through two weeks of tedious preparation, chopping the DNA into fragments 500 to 1,000 letters long and making millions of copies of each.

The machines glean many thousands of copies of the same strand to eventually determine the identity of individual letters. Once the fragments are sequenced, their relative positions on the genome still must then be laboriously reconstructed by a computer.

Perlegen, a spinoff of DNA chip p

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neer Affymetrix, is taking advantage of the fact that any two humans are 99.9% genetically identical. Why bother deciphering new genomes from scratch if you can just look for the 0.1% of DNA that is different? The company adapted Affymetrix's technology to create chips that each contain an array of 60 million fragments of DNA, ripped away from their complementary strands; the entire human genome fits on 200 chips.

The strands work like a molecular Light Brite, lighting up in those places where there's a mismatch between the chip's everyman DNA and that of the person being tested. Already this year Perlegen has scanned the DNA of 25 healthy individuals—at a cost of $1.5 million a pop—and found 2 million frequently occurring genetic variations. It plans to cull these variations to find patterns of particular mutations that predispose patients to major killers such as heart failure, as well as genetic alterations that increase the risk of side effects from prescription drugs.

U.S. Genomics is even more ambitious: It hopes to develop a machine that can directly read a single DNA molecule. Solving this problem first requires designing a device that can manipulate the fragile molecule without shredding it. The startup appears to have solved this tricky feat with its refrigerator-size GeneEngine.

Its heart is a silicon chip containing several channels that narrow into a funnel. A string-like DNA molecule, coiled up in a clump in its natural state, flows down the channel and into the funnel, where a maze of miniature rods forces it into a straight line. Then the channel narrows to a mere 600 nanometers wide, allowing only one DNA segment to pass at a time. Two lasers read fluorescent chemical tags that have been attached to the DNA molecule.

The whole process takes just 30 seconds, and the device is able to handle DNA strands up to 200,000 base pairs long, says Chief Executive Eugene Chan, who founded the company in 1997 while attending Harvard Medical School. He believes the GeneEngine will be handling whole chromosomes—every human cell has 23 pairs of them, and each chromosome holds 50 million to almost 300 million letters of DNA—within two years.

But U.S. Genomics' GeneEngine can only spot 1 in every 1,000 DNA letters. That may be good enough for mapping key signposts on chromosomes or rapidly locating a few key gene variations, says Venter, who recently joined the company's board. But an ideal sequencer of DNA it is not, at least for now.

The harder part will be designing a detector that can distinguish between two adjacent letters on a DNA strand which are half a nanometer apart, a small fraction of the wavelength of light (which makes it impossible to see them). That is the goal at a shop a few miles down the road from U.S. Genomics, at Harvard, where biophysicist Daniel Branton and colleagues hope to design a better detector by passing DNA, one letter at a time through a microscopic "nanopore" in a silicon membrane.

Their team, funded with $3 million by the military and Agilent Technologies, creates its nanopores by bombarding a wafer of silicon nitride with argon ions to form one tiny hole a few nanometers in diameter (a nanometer is one-billionth of a meter). That's just wide enough for a single DNA molecule to slip through. The concept is to place the membrane in a solution containing DNA and use opposing electrodes to force the DNA molecule through the nanopore at up to 1 million letters per second. Each letter will be read by detecting slight changes in the nanopore's electrical properties.

"The long-term goal is a handheld instrument the size of a calculator" for detecting DNA, says Branton, who hopes to have a prototype in a few years. "We may never get there, but we're going to learn an awful lot of useful information along the way." He sees a potential spin-off: a biosensor that could function as an early-warning system by detecting a single molecule (or cell) of a chemical or biological weapon.

Back in Rockville, Venter says he is "excited and encouraged" by the progress so far. So many promising technologies are in development, he figures, at least one is bound to pan out.

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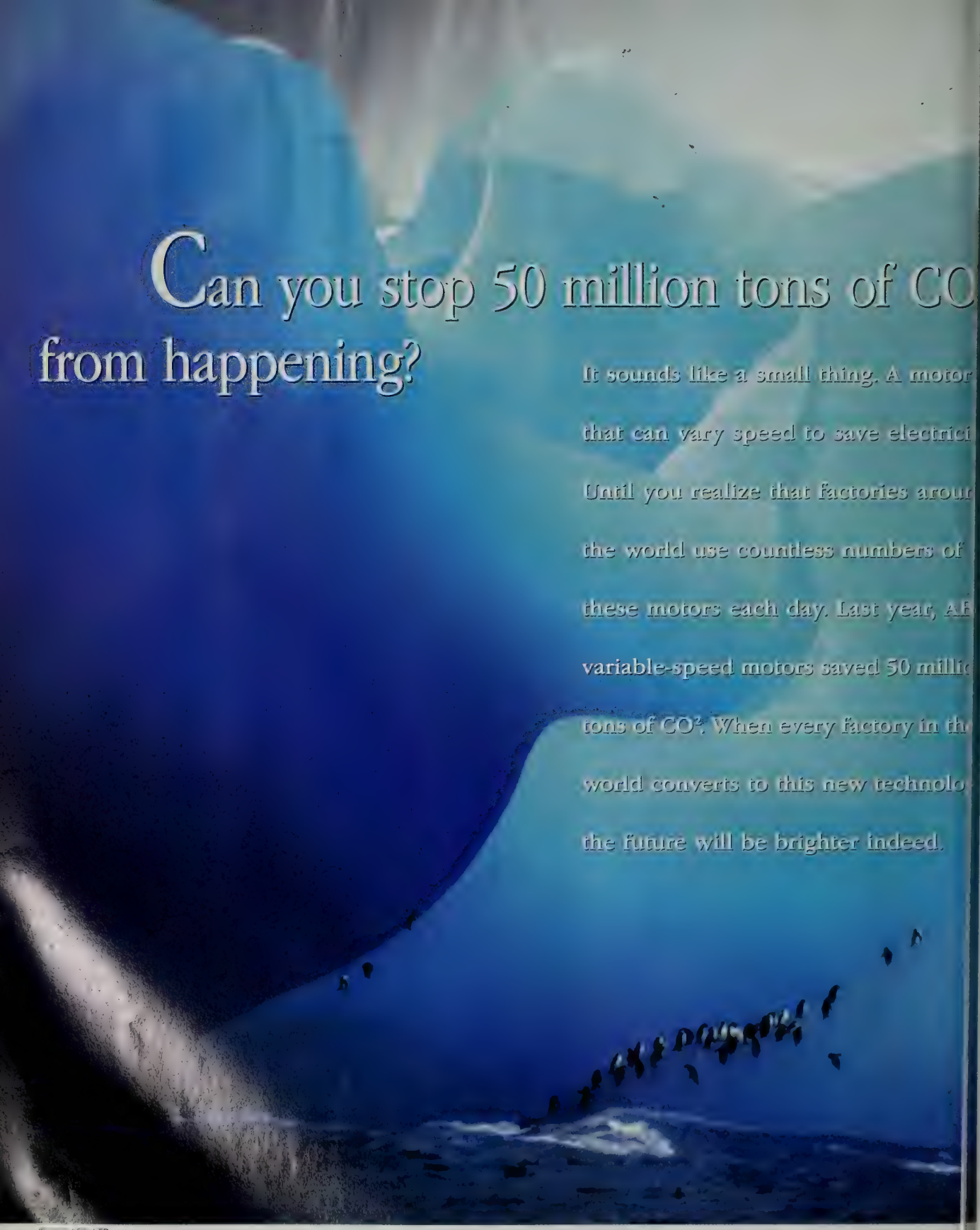


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HOW SNOOTY WAS BOSTON'S OLD RITZ-CARLTON? SO snooty that until the 1960s it refused to accept reservations made by telephone. To book a room, you had to be known personally to the manager—or you had to write a letter. The Ritz staff then appraised your handwriting, weighed your watermark and looked up your name in such references as *The Social Register*, *Who's Who* and *Poor's Index*. If you appeared in none? Well, the nearby Parker House is always nice.

Why anybody put up with this nonsense was simple: Beyond the hurdles lay unprecedented pampering. Perfumed elevators. Telepathic staff. A restaurant with treetop views of Boston's Common. And a crepuscular little jewel box of a bar whose signature drinks—the French 75 and Ritz Fizz—sent guests frictionlessly off to dreamland. Many bedrooms had fireplaces. (The "new" Ritz, which recently reopened after a yearlong renovation, has added a fireplace butler, whose job is to offer guests a choice of aromatic woods: Would madame like a little cedar this evening? Or perhaps the pine?)

Here, considerations besides money matter. As the Ritz's president explained at the hotel's opening in 1927, the Ritz was "not committed exclusively to the service of those with bulky pocketbooks. We are here to cater to people of good taste."

Hospitality extended even to theater folk, provided they behaved themselves and possessed the necessary standing. Oscar Hammerstein, who stayed at the Ritz during Boston try-

# Not Glitzy. *Ritzy*.

**Gloriously understated, its quirks intact, Boston's storied Ritz has reopened. Is this the best business-unfriendly hotel in America?**

BY CHANA R. SCHOENBERGER

outs of his shows, thought up the lyrics to "Edelweiss" while taking a shower in his room. Boors and weisenheimers, meantime, simply were not tolerated—no matter what their pedigree. Harvard student Franklin D. Roosevelt Jr., while drinking in the bar one night, felt an urge to leap up onto a table and start singing. The bar steward, Karl Reill, asked him to get down. Roosevelt imperiously asked if he knew who he was. "Yeah, I know who you are," said Reill. "Now get down off the table."

Management for years maintained a blacklist of persons who had made themselves permanently unwelcome, which included Richard Burton and Elizabeth Taylor, for having cohabited without benefit of marriage, and Pia Zadora, for having thrown a fit in the lobby.

Such quirks made—and still make—the Ritz an anomaly in a world of homogenized hotels. A Ritz partisan who stayed recently at the rival Four Seasons sniffs, it's "perfectly nice," but "a cookie-cutter hotel." (For a story on the international rivalry of the two chains, see FORBES GLOBAL, available at forbes.com.) The Ritz is not inhospitable to business, but it likes to relegate guests' commercial activities to a series of suites on the third floor, under the guidance of a technology butler. (For a sampling of the most business-friendly new hotels, see below.)

Norman the doorman, with 55 years on duty.

Ritz loyalists were much disturbed when Millennium Partners, the hotel's owner, announced in October 2001 they would be shutting it for a face-lift. Stephen B. Ashley, a real estate investor and board member of Fannie Mae who loves the Ritz as he does his own home, was immediately suspicious: "My first reaction was: Why? What needs changing?"

FORBES toured the hotel immediately after its Oct. 7 reopening. Little has changed. Much, though, has been cleaned, restored or improved—to the tune of $50 million. Comments from returning guests have been positive: "The bedrooms are more modern and brighter, the bathrooms bigger and the breakfast is as good as it's always been," says Richard Ramsden, a Goldman Sachs equity analyst in from London, who was reading the papers in the butter-yellow, newly reupholstered cafe.

Such favorites as chicken pot pie still grace the cafe menu. Upstairs, in the meticulously restored dining room, original Czech cobalt-and-crystal chandeliers still glitter. And the bar's oak-paneled walls remain the same—with new upholstery from Scalamandre and other upscale design houses. Martinis are stirred exactly 12 times, not 13. You still can get a Ritz Fizz (made with blue curaçao, amaretto, sour mix and champagne). What better place to celebrate this year's Harvard-Yale game (Nov. 23)? But if you feel an urge to leap up on a table and sing, resist it. F

# Coming Attractions

Tired of bland, predictable lodgings? Not sure if you're waking up in Providence or Portland? Take heart. New hotels rich in personality beckon.

**Minneapolis:** ART + TECH

LE MERIDIEN, A EUROPEAN CHAIN, IS GOING edgy with this 255-room hotel, slated to open in February. Style? "Haute minimaliste." Rooms feature wall-mounted, 42-inch plasma screen TVs, green-and-red bathrooms with etched glass washbasins and either freestanding, water-jet-equipped showers or oversize bathtubs with bear-claw feet. "Smart" mattresses conform automatically to sleepers' height and weight. And travelers staying in executive rooms can lather up with Hermès soaps, enjoy free high-speed Internet connections and imbibe complimentary cocktails during happy hour in the Infinity Room (a.k.a. the bar). Also included: fruit baskets and bottled water daily.

**La Jolla:** THE LODGE AT TORREY PINES

OKAY, SO IT'S NOT SAN DIEGO PROPER, BUT Torrey Pines is only 20 minutes away in La Jolla. Exurbanity has its perks: The new 175-room Lodge sits smack on two 18-hole public golf courses, with tee times easily available. Built in California Craftsman style, the Lodge includes a spa and fitness center. Specially concocted bath emollients feature sage, native to adjacent Torrey Pines State Reserve Park. The Lodge's A.R. Valentien restaurant pays homage to a California artist of the same name whose paintings adorn its walls. Need a lift? The Lodge's two Mercedes-Benzes will chauffeur you anywhere you want to go, within five miles.

**Washington, D.C.:** VARIOUS

THIS YEAR THE NATION'S CAPITAL GETS FIVE new boutique hotels. Four have already opened around Dupont Circle: the Topaz, Monaco, Rouge and Madera. Each has its own distinctive shtick. The Madera, in a former apartment building, offers huge rooms with a pied-à-terre feeling. The Topaz serves energy smoothies in its lobby every morning, while the Rouge feeds its breakfasters Bloody Marys and pizza—cold pizza. "We order it the night before," explains Thomas LaTour, chairman and chief executive. The Monaco, a historic 1840s government building, has 16-foot-wide corridors and a bar scene that attracts a young crowd (most of considerably narrower width). The Helix set to open in November, will have an 8-by-12-foot Magritte-style surrealist painting on its lawn. —*C.R.*

*For contact information on these new properties and others, visit forbes.com/hotels.*

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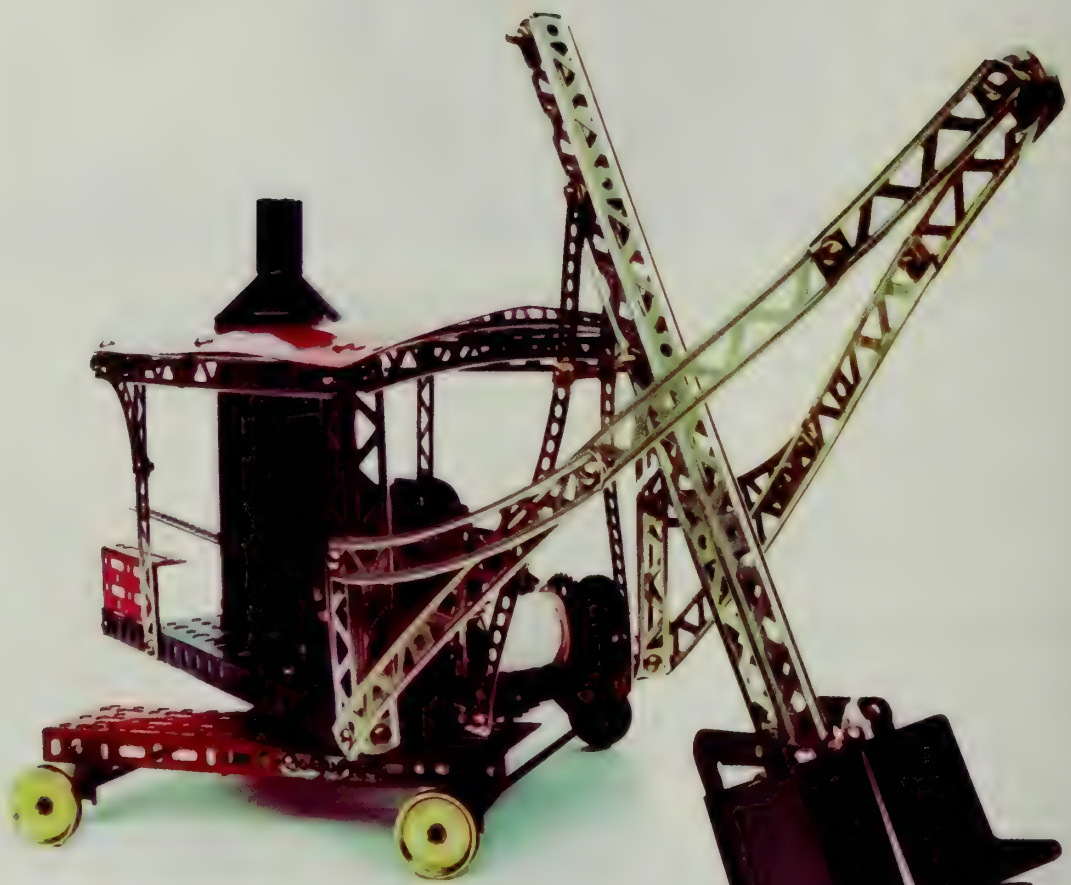
# Boy Toy

## A.C. Gilbert, father of the Erector Set, wasn't merely making toys. He was building men.

BY SUSAN ADAMS



ALFRED C. GILBERT, INVENTOR OF THE ERECTOR SET, WAS ALSO A PROFESSIONAL MAGICIAN, YALE Med School grad, Olympic athlete and big-game hunter. In fact, that's not the full extent of his dazzling résumé. The man also developed and marketed one of the first electrical sex toys. This object, according to the patent application for it, was designed to facilitate "sexual intercourse with the least expenditure of time and energy."

In *The Man Who Changed How Boys and Toys Were Made* (Viking, $25), author Bruce Watson tells the story of this gentleman with the diverse accomplishments. It starts in 1911 when the 27-year-old Gilbert rides a commuter train into Manhattan. As he approaches the East River, he marvels at a construction crane hoisting giant girders into the sky. He gets an idea.

At home that night in New Haven, he and his wife cut out miniature girders from shirt cardboard. A machinist transforms them into steel, and Gilbert adds a thin lip along the edge of each. That gives the little strips of steel rigidity, and it also makes it possible for the strips to overlap and make longer pieces. The young inventor already

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has a sheepskin from Yale Medical School, an Olympic gold medal in the pole vault, and his own company, Mysto Manufacturing, which makes magic tricks.

Gilbert introduced his Erector Set at the 1913 New York Toy Fair and had an instant hit. He was, along with his other talents, a marketing genius. While most toy-sellers of the day aimed ads at parents, Gilbert aimed his at kids: "Hello, boys! Make lots of toys," said one.

"Other toys," writes Watson, "were one-trick ponies. Push a button, turn a crank, and your plaything played for you." The Erector Set was different. It came with blueprints for familiar mechanical things like a derrick but also urged its owners to let their imaginations run. Gilbert offered builders of the most ingenious Erector creations lavish prizes, including a full-size automobile and a Shetland pony.

A monthly magazine, *Erector Tips*, displayed readers' constructions. The Gilbert Institute of Erector Engineering proved an especially crafty ploy: Boys coveting the title "Master Engineer" first had to peddle ten *Erector Tips* subscriptions and, at Christmas, demonstrate Erector Sets in stores.

Gilbert got 300,000 letters a year from boys, some signed "your loving son." In 1916 sales of Mysto, renamed A.C. Gilbert Co., topped $1.2 million, four times those of any other toy company.

As Watson's rather strained title suggests, Gilbert pitched the notion that Erector Sets had the power to transform young males from troublemakers into solid citizens. In his magazine he cited such examples as auto thief Earl Riley, who told a Portland, Ore. newspaper that he had swiped a car because he'd wanted to take it apart "and examine its engine." Sublimated into an Erector Set, this same urge to tinker could be turned to society's advantage.

In 1940 Donald Bailey of Britain's Royal Engineers used his Erector Set to design the portable Bailey Bridge, which spanned creeks and rivers and was hailed by Eisenhower as one of the three most important technological advancements of the war, along with radar and heavy bombers. In 1949 Yale Medical School student William Sewell used Erector girders, an Erector motor and rubber flaps from a party noisemaker to craft the first functional artificial heart. In an experiment, it kept a dog alive for 63 minutes.

Erecting an empire: A.C. Gilbert

The toy reached its apotheosis in 1931 in the Model No. 10, weighing more than 100 pounds. This set came with plans for 500-plus models, including a 4-foot-long Hudson locomotive and a 5-foot-long Zeppelin. It cost $70, the equivalent of $815 in today's money.

On the strength of Erector's success, Gilbert branched out into microscopes, chemistry sets and a nuclear science kit containing a small sample of radioactive material. And then there was the Gilbert Vibrator. This resembled a power drill, with an attachment made of bearings and springs.

Well into his 60s the senior Gilbert followed a strict regimen to maintain his vigor, running a mile every morning, then working out in a basement gym with Indian clubs and a punching bag before arriving at his factory no later than 7:30 a.m. In middle age he had taken up hunting, and, at age 66, bagged a 1,000-pound Kodiak bear, which he donated to the Yale Peabody Museum.

A staunch conservative, Gilbert hated unions and kept labor agitators at bay by treating his own workers extremely well. Benefits included free medical and legal advice, a year's unpaid leave for pregnant women and weekly movies and dances (with a live orchestra). Even so, by the time Gilbert died, in 1961, his company's fortunes were in decline. In Watson's epic explanation: "Boys no longer dreamed of becoming men. They dreamed of becoming cool."

Gilbert's son A.C. Jr. worked for GE for a bit, then joined the family company after World War II, working his way up to president. But he was a reluctant heir and sold the family's shares as soon as his father died. He remained president until his own death in 1964.

The Erector brand is now owned by the Japanese Nikko Corp., a maker of remote-control toy airplanes and cars. The toy is distributed in the U.S. by Brio, a public company based in Sweden that is known for wooden train sets. Today's Erector Sets are quite modest alongside Model No. 10. The biggest weighs 7.5 pounds and goes for $120.

If you happen to have hung on to a No. 10 in mint condition, you can probably get $15,000 for it. Don't break out the champagne—it represents a meager 4.2% real annual return. Better, relive your youth at the A.C. Gilbert Heritage Society Web site (www.acghs.org) or at A.C. Gilbert's Discovery Village, a children's museum in Salem, Ore. (www.acgilbert.org). You can also watch the dramatization of Gilbert's life in a TV movie called *The Man Who Saved Christmas*, due Dec. 15 on CBS.

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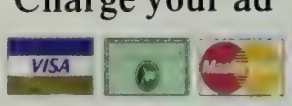


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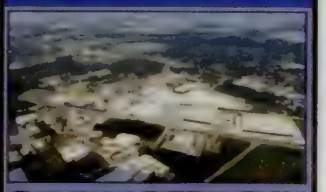

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# THOUGHTS

On the Business of Life

***Definition of a friend: Fred Young, that 82-year-old, ever-young head of Young Radiator Co., has been a good friend of three generations of Forbeses. Periodically, he posts to us pithy comments on some of ours. His most recent letter includes this—as perceptive an observation on the matter as any I've seen: "My own definition of a friend is someone whom you wish to do something for, for which you wish nothing in return."*** —MALCOLM S. FORBES (1976)

*Between friends differences in taste or opinion are irritating in direct proportion to their triviality.*

—W.H. AUDEN

*Treat your friends as you do your pictures, and place them in their best light.*

—JENNIE JEROME CHURCHILL

*Some people go to priests; others to poetry; I to my friends.*

—VIRGINIA WOOLF

*Friendship is a pretty full-time occupation if you really are friendly with somebody. You can't have too many friends because then you're just not really friends.*

—TRUMAN CAPOTE

*My true friends have always given me that supreme proof of devotion, a spontaneous aversion for the man I loved.*

—COLETTE

*Money couldn't buy friends, but you got a better class of enemy.*

—SPIKE MILLIGAN

*Love is only chatter,*
*Friends are all that matter.*

—GELETT BURGESS

*Sooner or later you've heard all your best friends have to say. Then comes the tolerance of real love.*

—NED REM

*Most people enjoy the inferiority of their best friends.*

—LORD CHESTERFIELD

*It is good to have friends, even in hell.*

—SPANISH PROVERB

*A man must eat a peck of salt with his friend before he knows him.*

—CERVANTES

*It's no good trying to keep up old friendships. It's painful for both sides. The fact is, one grows out of people, and the only thing is to face it.*

—W. SOMERSET MAUGHAM

*It pays to know who your friends are but it also pays to know you ain't got any friends.*

—BOB DYLAN

## A Text...

***Behold, how good and how pleasant it is for brethren to dwell together in unity!***

—PSALMS 133:

Sent in by Louise Saunders, San Antonio, Te
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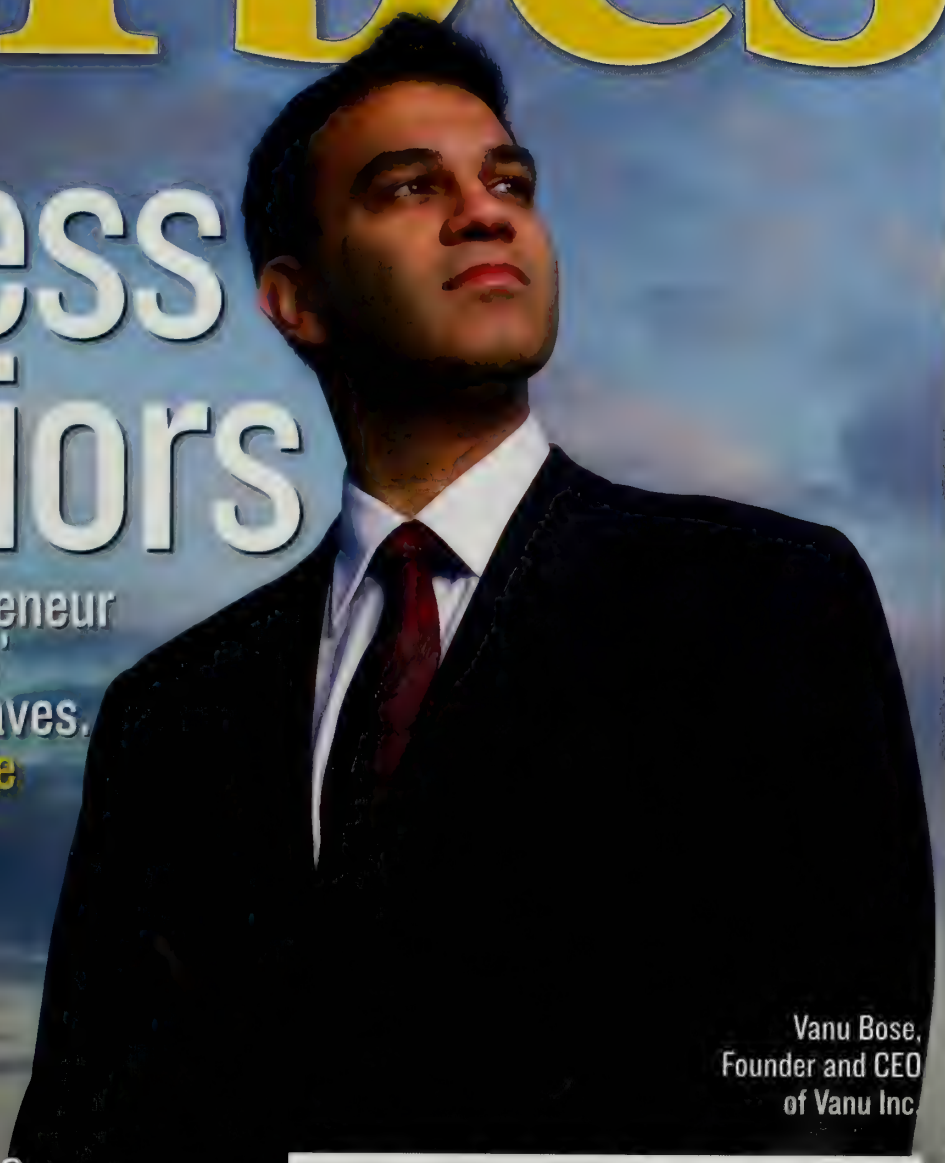

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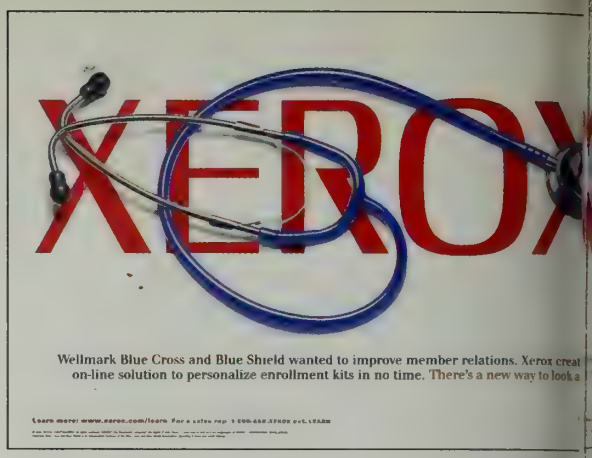


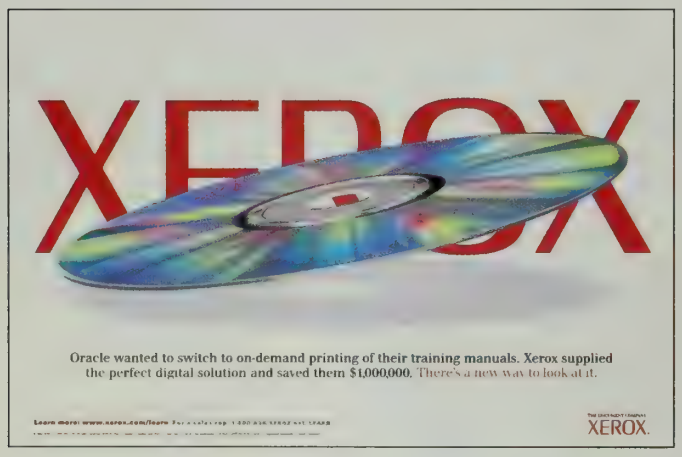


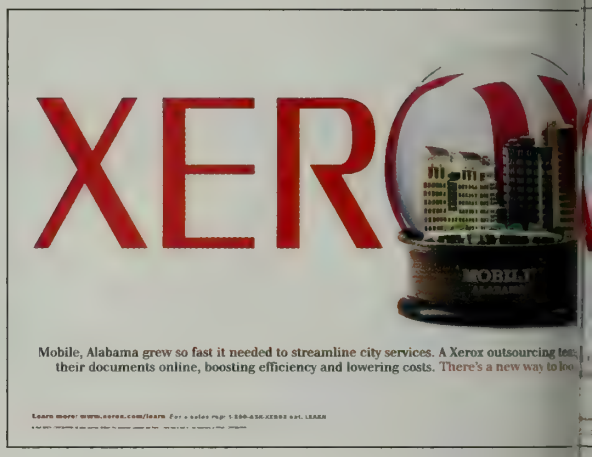

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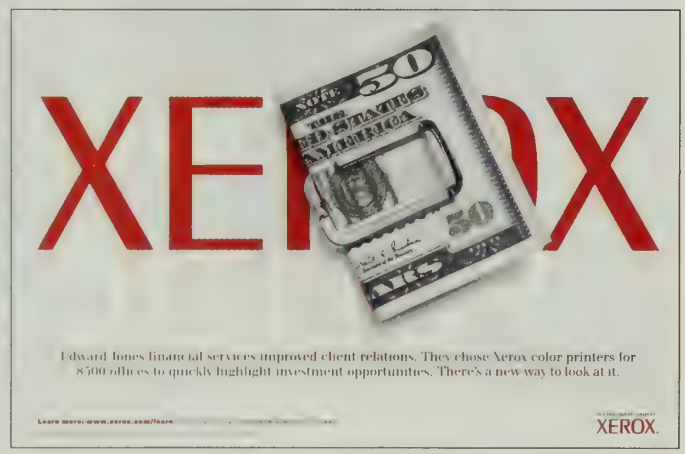


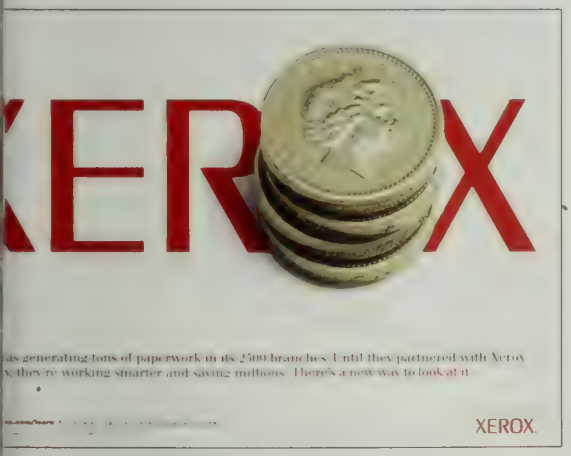


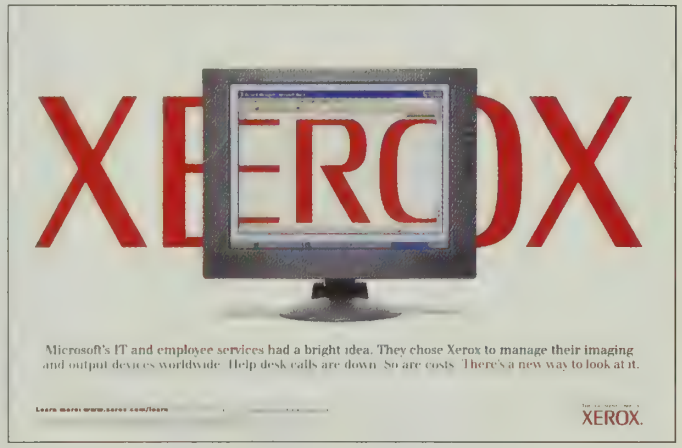


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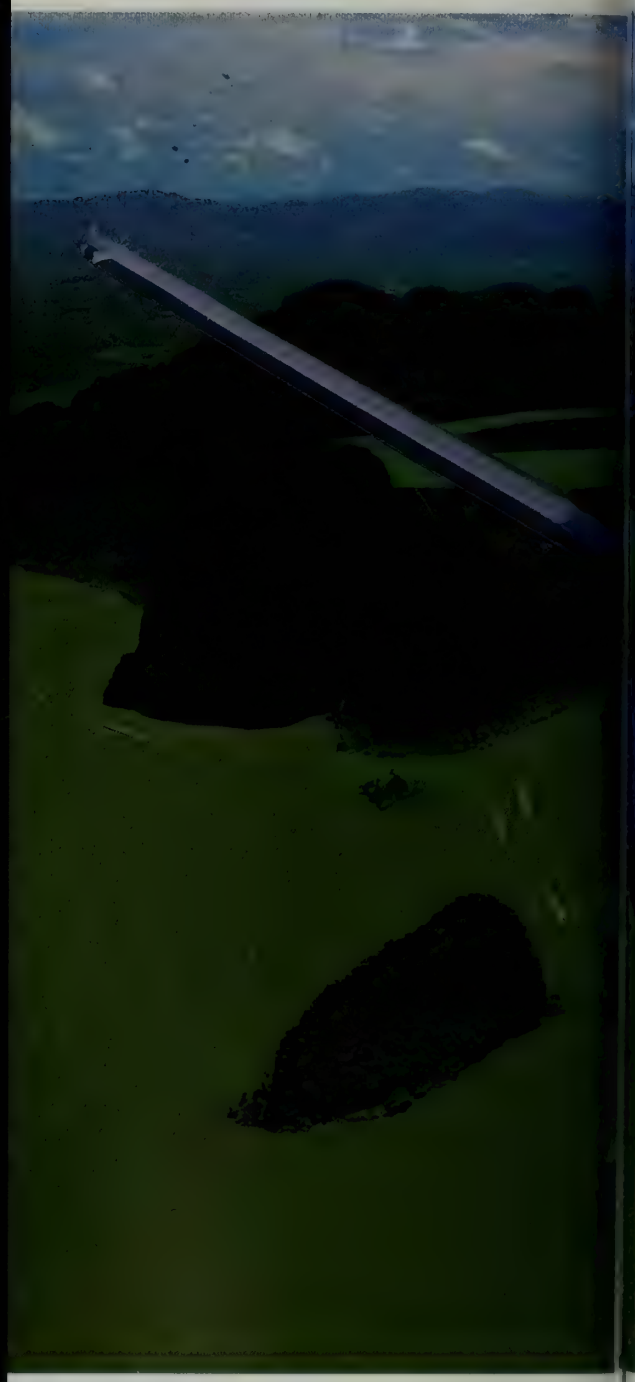

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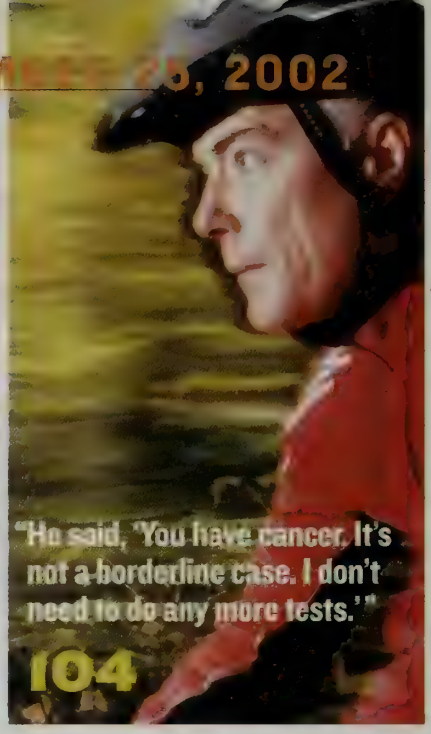


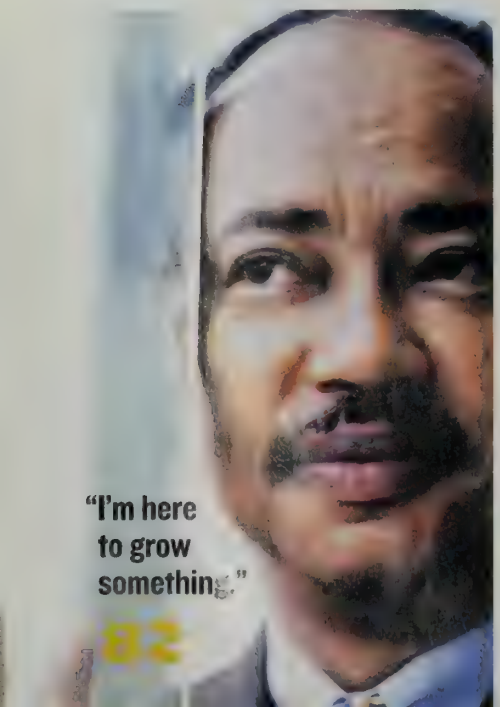



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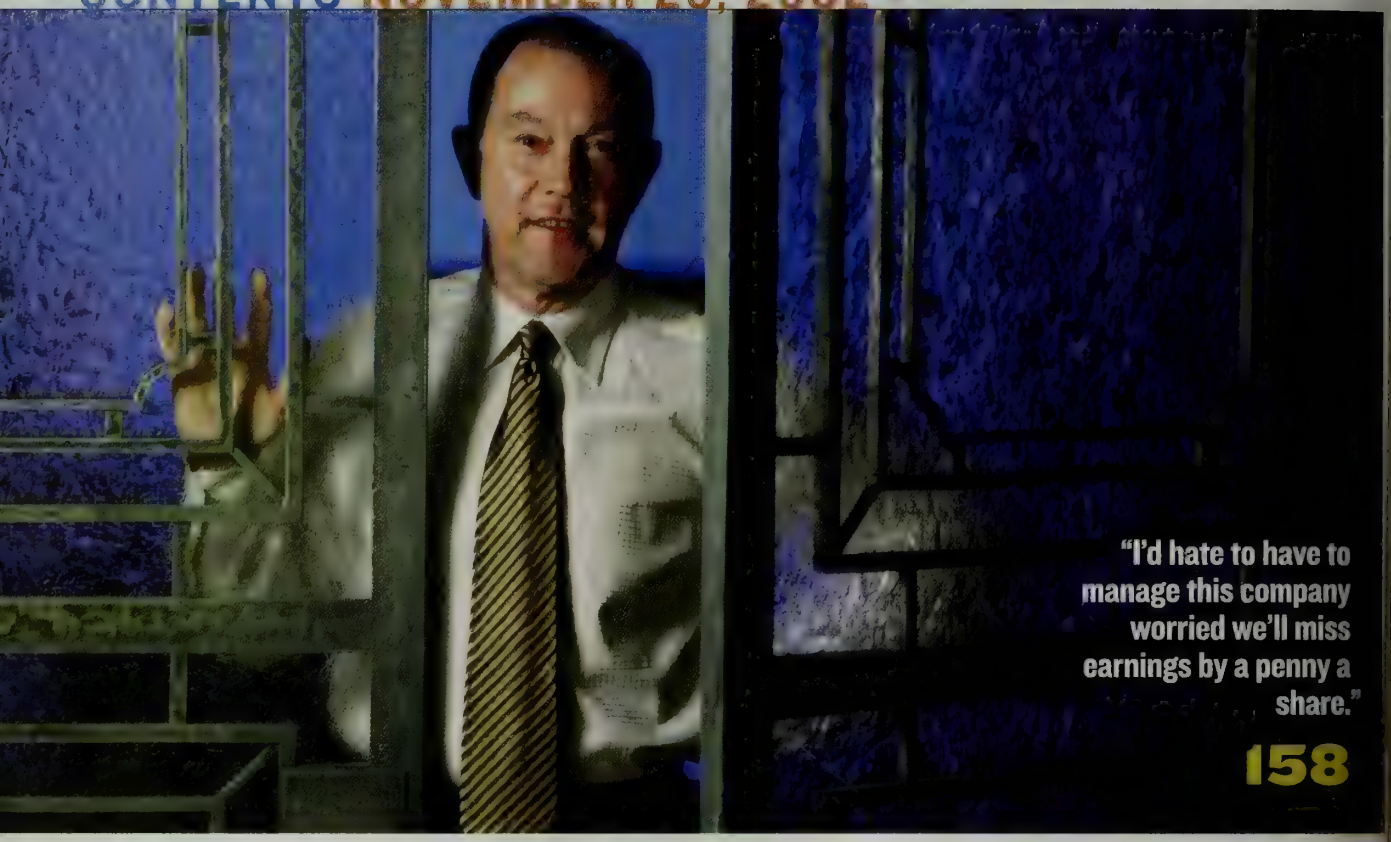



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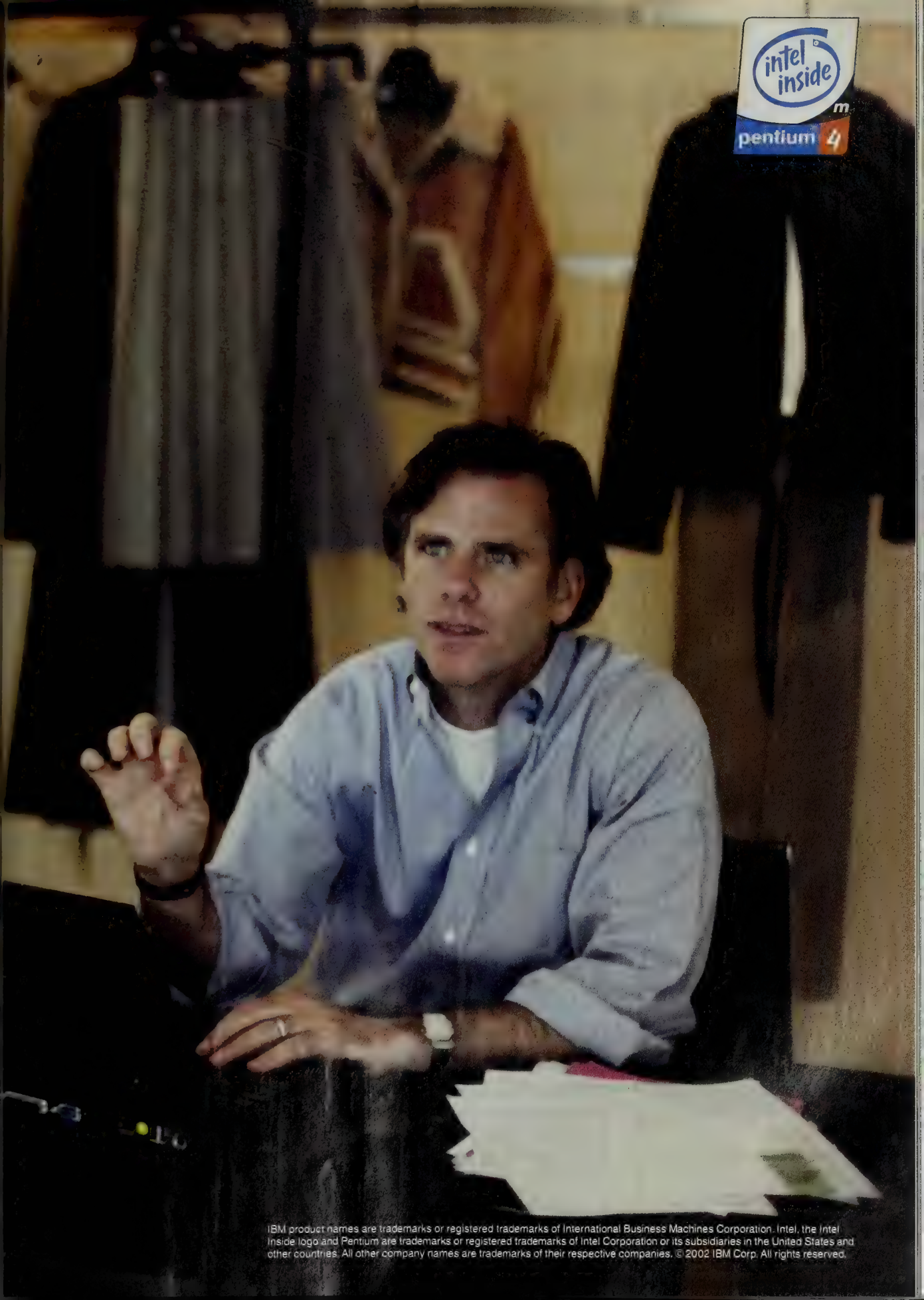


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Paul Maidment

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Janet Novack

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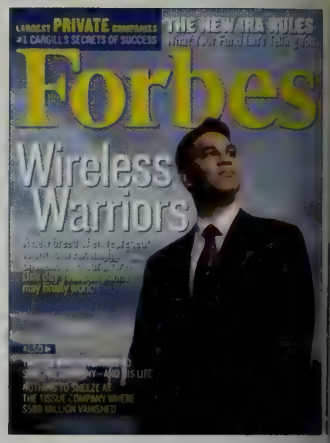


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# SIDE LINES

**The Greek Solution** Two real estate problems bedevil New York City. They seem to bear no relation to each other. I propose to link the two and invoke a master solution. It's not my idea. I am merely resurrecting a clever scheme invented long ago.

Problem one is that it is very hard to do an assemblage—the purchase of all the small parcels on a city block by one owner who wants to put up a skyscraper. Working over a span of years and using lots of dummy corporations, a builder will assemble most of the lots he needs to construct the high-rise. But when he gets to the last shoe store or porn parlor, the proprietor figures out what is going on and demands an outrageous sum to put his signature on a deed. This is a major headache for builders.

The uneasy solution New York has arrived at: Let the developer of a shiny new tower "condemn" the needed parcels, at a price he finds agreeable. Not just any developer qualifies for this power; it helps, say, to be connected to a politically powerful newspaper. Crony capitalism. To find out more about how Ferdinand Marcos-style economics works in New York and California, read the story by Ira Carnahan on page 112.

**Recently condemned property near Times Square.**

Second problem, also one more suggestive of the Philippines than the world financial capital, is that property tax assessors are underpaid. So much so that they are tempted to take payoffs for lowering assessments. The recent prosecutions for bribery will inspire a certain level of honesty over the near term, but the problem is sure to recur.

Megasolution: Retire the assessors and let every property owner in Manhattan determine his own assessment. Then grant every citizen the right to buy any piece of property for its assessed value.

You might, if you were an owner, set your price a bit above what you consider a fair value, lest you be forced out too cheaply. To the extent other owners do the same, this caution would not cost you anything in higher taxes, because tax rates would come down proportionately. Assemblage would cease to be a chore.

It's been done before. A footnote in one of legal theorist Richard Posner's books tells us that the ancient Athenians created a self-assessment system just like this. Maybe that's where they got the parcel for the Acropolis.

William Baldwin
EDITOR

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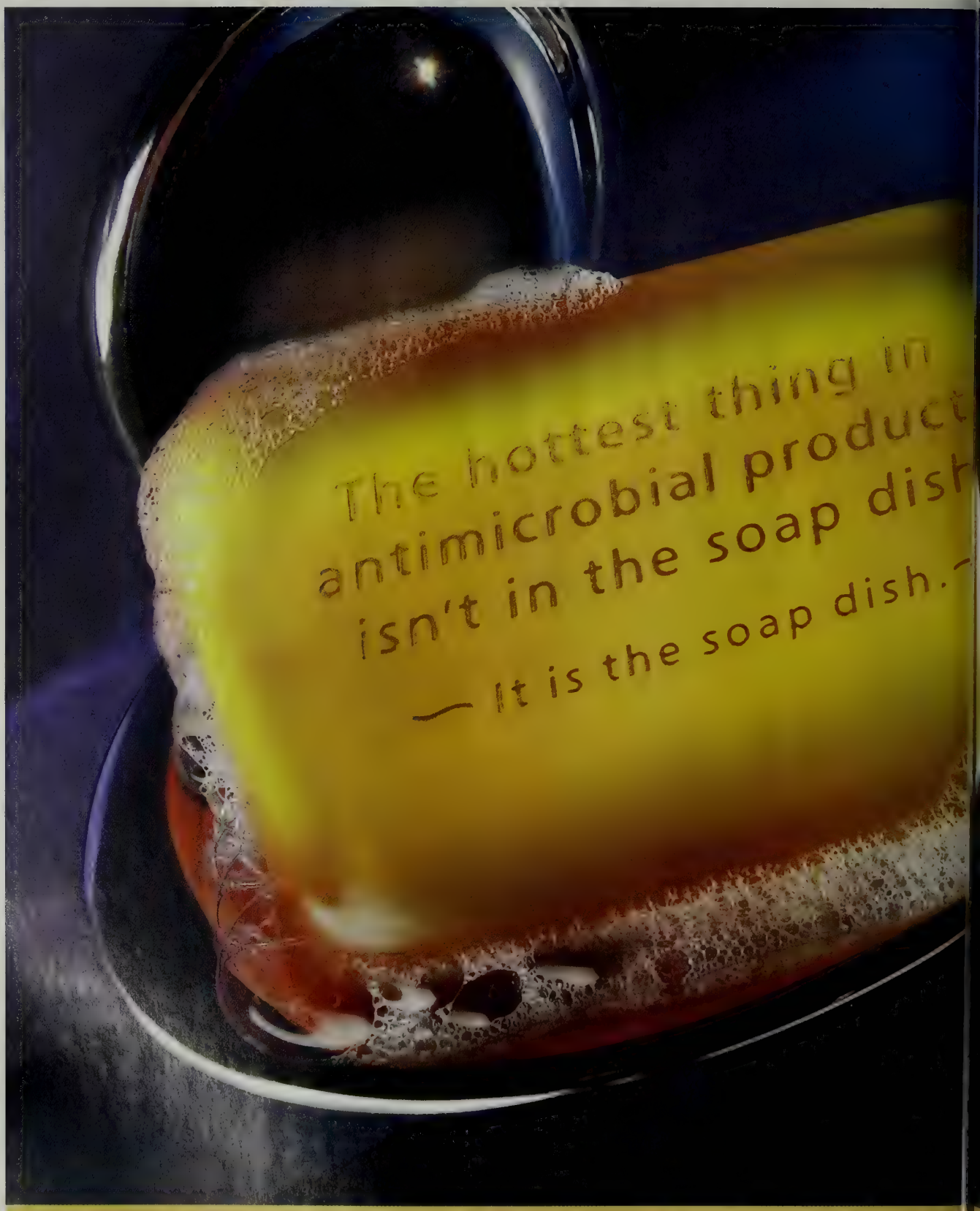


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# READERS SAY

## Currency Devaluation

Steve Hanke's "No Greenback Crash" *(Nov. 11, p. 180)* is hopelessly optimistic. He ignores that the dollar has declined sharply about once per decade for the last 30 years. Hanke understates the current levels of the U.S. current account deficit and thus our need to import foreign capital. The deficit reached an annual rate of $520 billion, and thus 5% of the GDP, in the second quarter. Taking into account American investments abroad, which Hanke notes, we must import almost $4 billion from abroad every working day to balance the books. Our net foreign debt has thus already soared to $2 trillion and is climbing by another 25% each year. Such a dependence on external financing is unsustainable. Hanke extols the virtue of dollar purchases by foreign central banks but ignores how these interventions distort the currency market and keep the dollar overvalued in trade terms, adversely affecting large numbers of U.S. workers and companies. Our external deficit is the largest imbalance in the U.S. economy and will become the final bubble to burst.

C. FRED BERGSTEN
*Director, Institute for International Economics*
*Washington, D.C.*

## Den of Thieves

I write in response to "The Great Dividend Heist" *(Nov. 11, p. 46)*. If there was negligence in the payout of the dividends, it seems the members of the board of directors should be liable for breach of fiduciary responsibility, negligence and perhaps even malfeasance. Authorizing payout of dividends from funds that should have been retained, and perhaps help sustain the company, makes it appear that the board was not acting in the best interests of the corporations and its owners. If it was done to move cash out of a sinking company into the pockets of influential investors, maybe there are more serious motives behind the board's decision.

EUGENE T. QUAIL
*Weidman, Mich.*

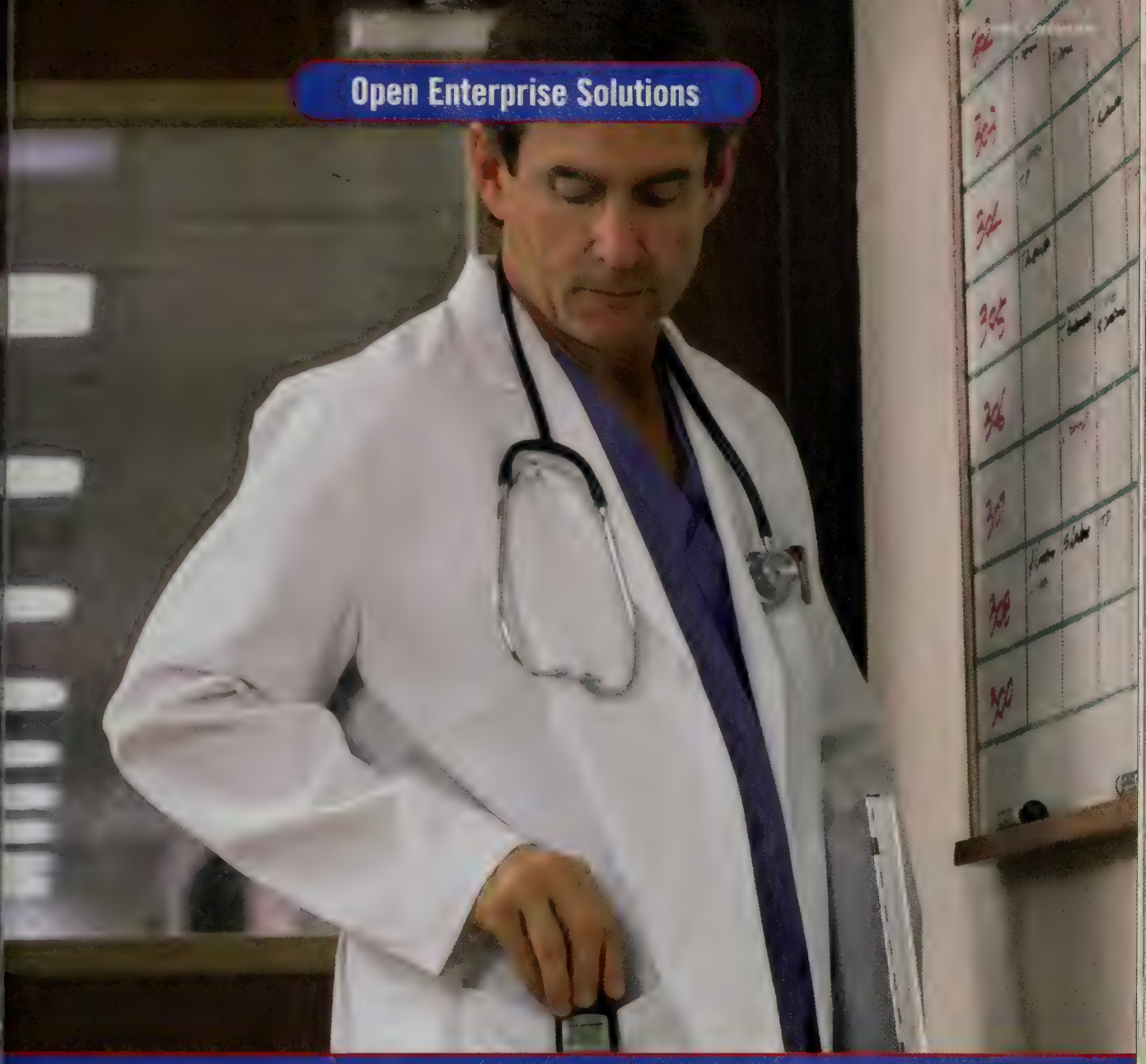
## Oil Reserves

"Hitting OPEC By Way of Baghdad" *(Oct. 28, p. 126)* might be myopic regarding the generous allocation of Iraq's oil spoils on the market. OPEC is already overproducing on its quotas, and a flood of Iraqi oil would only exacerbate this quasi-cartel's calibration challenges. Russia threatens Saudi Arabia's traditional role as "supplier of last resort" for vulnerable net importers. The impact of accelerated OPEC and non-OPEC production would pressure U.S. independent producers who drill about 85% of our oil and natural gas wells despite their higher costs. Balancing oil supply and demand has been an inexact science, and Iraq's reserve base guarantees a role in myriad scenarios. We must reduce our import dependence and maintain our domestic producing industry's sustainability.

FREDERICK J. LAWRENCE
*Director of Economics,*
*Independent Petroleum Association of America*
*Washington, D.C.*

## Rewarding Risk

Presumably the idea behind using a ris reward ratio to measure investment pe formance as described in "Assess Yo Risk" *(Oct. 28, p. 338)* is that the mo risk the manager takes, the more l return will depart from that of a pass benchmark. Alas, the fund's market r

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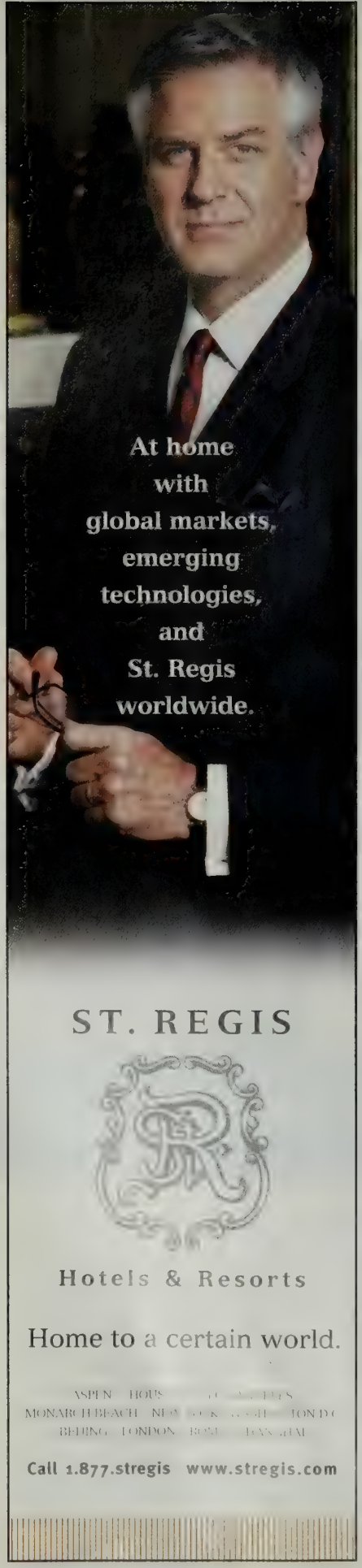




merely reflects the kind of stocks the manager owns, rather than how aggressively he trades them. Because beta measures market risk, it is the wrong risk measure to use in a risk-reward ratio.

JACK TREYNOR
*Palos Verdes Estates, Calif.*

## Investment Incentives

"Cockpit Fight" *(Nov. 11, p. 48)* is wrong when it concludes that a Honeywell patent infringement lawsuit is depriving aircraft passengers of the Terrain Awareness & Warning System (TAWS). Without patents and the means to enforce them, TAWS would not exist. No one could have invested the hundreds of millions that enabled Honeywell to invent this system. True, some aircraft still lack TAWS, but it is ridiculous to suggest a lawsuit has anything to do with it. The U.S. and other leading nations have given aircraft operators until 2005 to equip their fleets. Most major airlines have done so. Honeywell has delivered 20,000 systems, averting numerous potential crashes and saving lives. Honeywell accepts fair competition in filling the remaining need, but will not tolerate infringement. It is up to competitors to invest in their own technology.

KYLE HULTQUIST
*Vice President,*
*Honeywell Aerospace Electronic Systems*
*Phoenix, Ariz.*

## Copyright Protection

"Dr. Seuss, Meet Milton Friedman" *(Oct. 28, p. 132)* says an individual's copyright protection continues for life plus 70 years. That could be 100 years. Why should copyright protection be greater than patent protection? If Elvis Presley's daughter uses her wealth to enrich our society, that has missed me. Yet the law dumps millions into her bank account. But if a company develops a lifesaving drug—they get about 17 years. A hundred years for copyrights compared to 17 years for patents. Does that sound fair?

CARL CHARBONNET
*Mountain Brook, Ala.*

## Pen Names

Regarding the article "Hungry Heart" *(Nov. 11, p. 151)*: While it's true Harlequin and I ended our active professional partnership of more than 20 years in 2002, the term "ditched" is not only inaccurate but also insulting to both the publisher and myself. I continued to write for both Harlequin and Putnam for a decade before making the decision to focus solely on mainstream fiction. I was not poached. It's also inaccurate to say that I'm better known as J.D. Robb. While I'm delighted the books I write under this name have generated a growing audience since the first one was published in 1995, sales, volume and name-branding weigh much more heavily on the work I do under my own name.

NORA ROBERTS
*Keedysville, Md.*

## Fair Practices

I was disappointed by "The Man Who Knows Too Much" *(Nov. 11, p. 68)*. Fair Isaac does not compile nefarious profiles on consumers. We provide tools and technologies that our clients use to make effective use of the data that their customers provide to them. Tools that help businesses better understand their customers and develop appropriate offers based on consumer-provided data are essential if companies are to compete.

W. THOMAS MCENERY
*Vice President, Fair, Isaac*
*St. Paul, Minn.*

## Faulty Figures

Due to faulty information from a database service, "Right Up There With Some Personal Injury Plaintiff Lawyers" *(Oct. 28, p. 109)* erroneously stated that Patrick Nachtigal, general counsel of Ingersoll Rand, has a direct and indirect holding of 715,424 shares, worth $24.6 million. In fact the stake is only 18,852 shares, worth $650,000. Julian Soshnick, general counsel of Analogic, was listed as directly and indirectly holding 4,462,290 shares, worth $17 million. That stake is in a charitable remainder unitrust, of which Soshnick is one of several trustees. Neither he nor family members have any beneficial interest.

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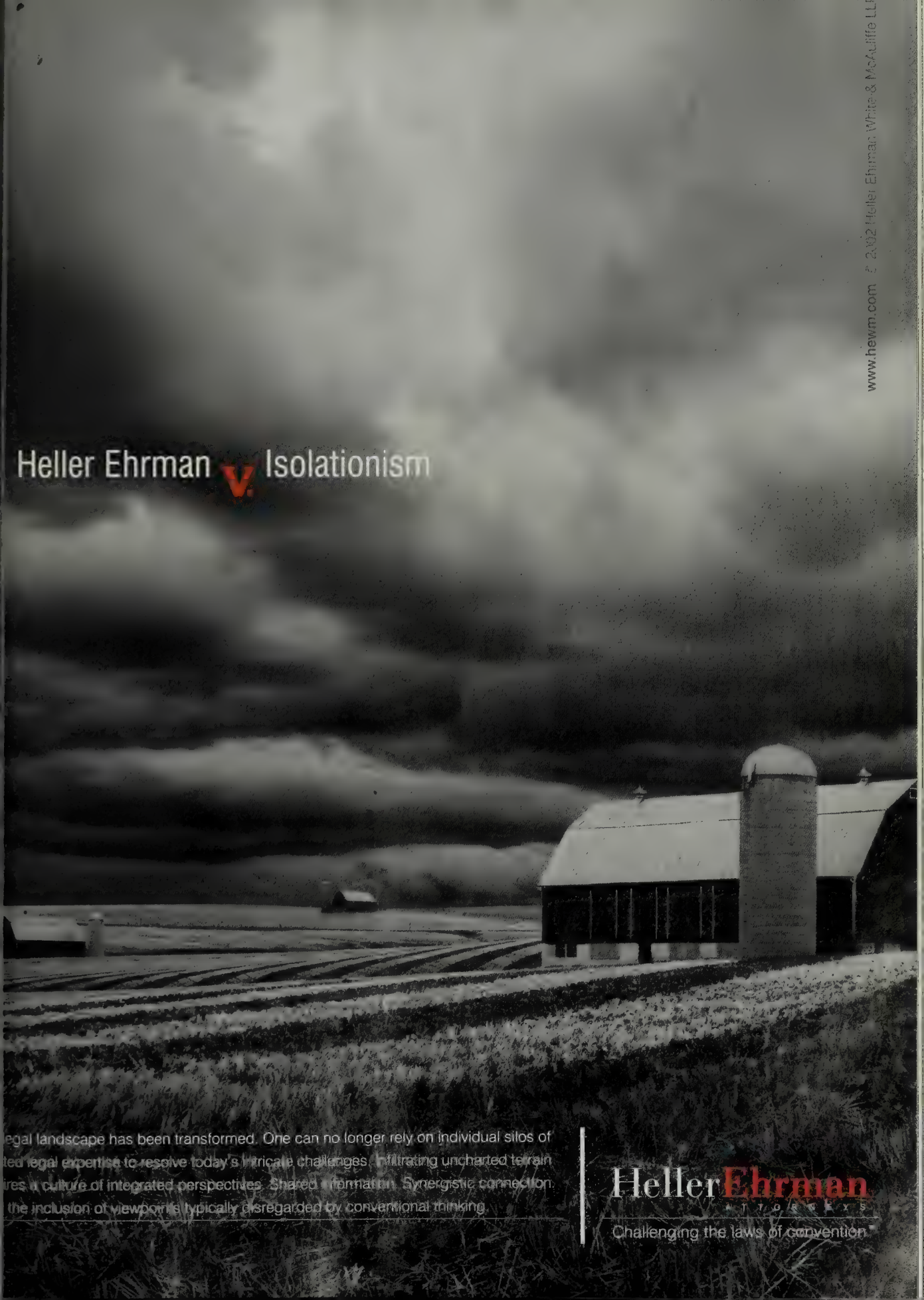
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the inclusion of viewpoints typically disregarded by conventional thinking.
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ATTORNEYS
Challenging the laws of convention.

When Nikon Inc. saw the next big trend in photographic technology — digital cameras — it was ready to deliver with some of the most advanced product designs in the marketplace.

# PICTURE THIS

The company's reward? The consumer digital camera sector now accounts for Nikon's fastest-growing product line. However, keeping retailers well supplied to meet the demand of tech-hungry consumers and professional photographers meant the Nikon distribution network would need to be reengineered for this market segment.

"In our business, it's not enough just to produce leading-edge products," says Arnold Kamen, Nikon's vice president of Operations and Customer Service. "Having the ability — and visibility — to predict how merchandise is available and when it can be distributed makes the difference in staying ahead of customers' needs."

Outsourcing the distribution of an entire product line would be a rare and innovative step for a leader in the consumer electronics industry, but innovation is Nikon's forte. So who better to leverage the latest developments in logistics management practices?

Nikon turned to UPS Supply Chain Solutions, which implemented a plan to synchronize Nikon's supply chain to move its product from manufacturing centers in Korea, Japan and Indonesia to literally thousands of distributors or retail stores in the U.S., the Caribbean and Latin America.

This allowed Nikon to focus on its core business — developing and marketing the world's leading precision optics equipment — while UPS manages air and ocean freight, related customs brokerage, subsequent small-package delivery and other supply chain needs.

The new process calibrates the movement of goods and information by providing SKU-level visibility within very complex distribution and information systems.

> "We have better visibility of our products, which enables us to prov
> a higher level of service to retailers and, ultimately, the final custom
> — Arnold Kamen, Vice President of Operations and Customer Service, Nikon

UPS also provides Nikon advance shipment notifications throughout the U.S., Caribbean and Latin American markets. Talk about a "snapshot" view of your supply chain.

Nikon's freight is directed to Louisville, Ky., which not only serves as the all-points connection for UPS's global operations, but also is home to the UPS Supply Chain Solutions Logistics Center main campus. Here, merchandise can either be "kitted" with accessories such as batteries chargers, or repackaged to in-store dis specifications. Finally, the packages be distributed to retailers across the or exported, using one of UPS's numer worldwide transportation services.

"By combining UPS services, we h the ability to greatly shorten our su chain," says Kamen. "And, although we achieving greater speed, we have be visibility of our products, which enable to provide a higher level of service to r ers and, ultimately, the final custome

UPS Supply Chain Solutions is forgi broad spectrum of creative solutions customers like Nikon, including logis freight, customs brokerage, mail serv consulting and even financial serv Synchronizing those elements of merce gives companies a signifi advantage in leveraging their strengt build complex, global operations.

For more information about UPS S Chain Solutions, visit www.ups-scs.c

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y Steve Forbes, EDITOR-IN-CHIEF

*Vith all thy getting get understanding"*

# Time to Heave Harvey

TT IS IN IT NOW FOR FAILING TO NOTIFY FELLOW SEC COMissioners of potentially serious problems with his pick to head e new accounting oversight board. This follows Pitt's going WOL last summer as the corporate/Wall Street scandals reached their peak and politicos, responding to an angry public, felt the need to do something quickly.

Pitt's abdication of responsibility gave pillaging trial lawyers ample new opportunities to plunder, and clobbered equities as well.

# IMF Dashes Brazil

RAZIL'S INCOMING PRESIDENT, LUIZ INÁCIO LULA DA SILVA—ONCE fire-breathing leftist—is trying to reassure the International Monary Fund, bankers and investors that he will not repudiate Brazil's ebt, stoke inflation or go on a government spending binge. lthough the President-elect is emphasizing fiscal responsibility, he oes not realize the IMF has prepared a sucker punch for him that ill deepen Brazil's already serious economic crisis. Brazil's currency, e real, has lost more than 30% of its value this year, the economy is agnant and Brazilian bonds and equities have been battered.

The IMF doesn't know how to return Brazil and other troubled ountries to prosperity. It is bleeding these countries dry in the name f saving them. Brazil's economic policy is a disastrous combination f high interest rates, high taxes, a weak currency and growth-suffoating regulations, subsidies and import quotas. Brazil will go the ay of Argentina unless its economic course is drastically altered.

Brazil should start by changing its destructive monetary policy. The central bank thinks raising interest rates is the way to strengthen a currency. Wrong. The bank should buy up reais in the open market until the real's value vis-à-vis the dollar goes up, say, 25%. The bank's present approach is ludicrous—it uses dollars to buy reais, then it pumps those same reais and more back into the economy. That's sterilization: What one hand takes, the other gives back. The policy should be simple: *Reduce* the supply of reais, which will increase the price of reais. Voilà! The currency crisis is over. Yet the central bank, to the applause of the IMF, continues to chase its tail.

Lula should also cut tax rates, à la Ronald Reagan, John Kennedy and Margaret Thatcher. If Lula increased incentives and reduced barriers to entrepreneurial activity, the economy would grow—which, in turn, would mean more tax revenue to fund Lula's desired social programs. Growth would also attract foreign capital.

# Push Back for a Monti-back

T LAST, SOME GOOD ECONOMIC NEWS FROM EUROPE: THE uropean Union's Court of First Instance has just slapped down ntitrust czar Mario Monti for the third time since summer, verturning yet another of his vetoes of a major merger. Investors hould cheer. Monti's high-handed, disruptive, capricious, rotectionist behavior had ecome one more obstacle to U economic growth.

Until these setbacks, Monti as becoming a law unto himelf. Unlike in the U.S., where e government has to prove its case in court, Monti's commission r competition has been prosecutor, judge and jury. It has done hatever it wants, arrogantly assuming that any company that ecided to challenge its decisions and take a case to court would be ymied by long delays. Arbitrariness has become the commission's trademark: In the middle of an investigation, the agency has blithely changed the grounds on which it was objecting to a merger.

More ominously, Monti's agents have developed Stalinist tactics: They have raided corporate offices and carted off documents—copies of e-mails and supposedly confidential legal papers (no client-lawyer privileges here)—without search warrants. Executives' lawyers haven't been present while the executives were questioned during raids. Monti feigned surprise that anyone, other than wrongdoers, would object to his expressed desire to conduct nighttime raids on executives in their homes. As he explained, conducting raids in homes prevents suspects from having time to hide or destroy potentially damaging documents. He won't be able to do that now.

*Court Deals New Setback to Europe's Antitrust Policy*

—*New York Times*

# Taxing Attitude

HE SARBANES-OXLEY ACT OF 2002, PASSED IN THE WAKE OF CORorate scandals, bars accountants from providing many non-audit ervices to their audit clients. The purpose is to prevent Enron-like conflicts of interest: auditors going easy on dubious bookkeeping for fear of losing lucrative nonauditing consulting contracts. Congress was vague on the details, leaving it to the regulators to write

the rules. One member of the SEC's new accounting oversight board, which Sarbanes-Oxley created to churn out the regs, co-wrote—before his appointment—an article that raises the possibility that accounting firms may no longer be able to provide most tax-related services for companies whose books they audit.

This is a questionable, wrongheaded interpretation of the bill. It makes sense for an accounting firm to provide an array of tax services—tax returns, tax advice, actuarial services and the like. This kind of tax work is closely related to auditing the books. Reform is one thing. Going overboard, quite another.

# Two Amazing Men

WALTER ANNENBERG, LIKE HIS HERO, RONALD REAGAN, WAS EASY to underestimate. That suited him, as he spent a lifetime moving from one triumph to the next. When his father went to prison in the 1940s for tax violations, skeptics wondered if the young Annenberg could run the family publishing business. Walter did so brilliantly, his crowning achievement being the founding of *TV Guide* in the nascent days of television. When President Richard Nixon made Walter Annenberg ambassador to the Court of St. James's, critics carped. He proved them wrong again by becoming a very effective, much-admired diplomat.

**Character and ability enabled Annenberg to consistently confound skeptics.**

As Annenberg wound down his business activities, he focused his formidable energies on philanthropy and the arts. A generous donor, he was no pushover, however. When he proposed to fully fund an annex to the Metropolitan Museum of Art, certain activists raised a ruckus. Perhaps some of them anticipated that, to get the project moving, Annenberg would pony up money for some of their causes. If so, they had misread their man. Annenberg, in effect, said that life is short; there are great things to be done, so let's move on. And he walked away from the project.

**Thanks to Ambrose (with Tom Hanks and Steven Spielberg) most Americans now appreciate what we did in World War II.**

Walter took palpable pride in his extraordinary collection of paintings. When I once visited him and his wonderful wife, Lee, at their California home, Sunnylands, Walter, with great relish, gave me a tour. It became evident that he knew as much about these pieces as any specialist.

The sense of honor that imbued Annenberg's life stands in stark relief against that of certain business leaders in today's headlines.

Like Walter Annenberg, historian Stephen Ambrose was a man of passion and great energy. He could produce scholarly research as well as anyone in his field. His book on Civil Wa General Henry Halleck deeply impressed former Presiden Dwight Eisenhower. Ike promptly invited the young man to hi home in Gettysburg and entrusted Ambrose with the task o writing his biography. The resulting two-volum work won praise for its insight and depth.

Ambrose never let his strong opinions fog th evidence he uncovered. No fan of Richard Nixor Ambrose wrote a biography that objective ob servers believe is remarkably fair and balanced He admitted that some of his views on Nixo changed during the course of his research.

Ambrose hit his stride when he began his wor on *D-Day June 6, 1944: The Climactic Battle of Wori War II*. He quickly realized that WWII veterans we not properly appreciated by subsequent generatior of Americans. That book and his later works exan ining this global conflagration helped to re tify that lack of gratitude. Ambrose becar the moving force behind the creation of th National D-Day Museum in New Orlean No mean fundraiser, he quickly persuade us to open our pocketbooks, and we glad worked with him to enlist others in the caus

Ambrose's research abilities and his wo derful way of writing won him a wide auc ence. That may account for the spiteful gl with which some critics attacked him wh it was discovered he hadn't put quotatic marks around certain passages in his books that had been tak from other works—even though all those passages were ful footnoted. Stephen Ambrose, a popular contributor to our sis publication, *American Heritage*, was part of a great line of Ame can historians that includes Bruce Catton and Francis Parkmar

## RESTAURANTS: GO, CONSIDER, STOP

*Edible enlightenment from our eatery expert Tom Jones and colleagues Patrick Cooke and Monie Begley, as well as brothers Bob, Kip and Tim.*

● **Roth's Westside Steakhouse**—680 Columbus Ave., at 93rd St. (Tel.: 280-4103). An old-fashioned steak house-cum-jazz-spot that's comfortable and pleasant. Porterhouse steak for two is delectable, fried calamari is wonderful, and the crab cakes are truly filled with crab. Desserts are divine.

● **Scalini Fedeli**—165 Duane St., off Greenwich St. (Tel.: 528-0400). Little to recommend the trip here. Service is both inept and condescending. Though the food is decent enough, prices are so high one has to ask why. For those who care, portions are large.

● **Mi Cocina**—57 Jane St., off Hudson St. (Tel.: 627-8273). Charm ing Mexican restaurant that deserves its popularity. Margaritas ar made to special order from an extensive and sophisticated tequil menu, the guacamole is spicy, and the traditional fare is tops.

● **Il Giglio**—81 Warren St., near West Broadway (Tel.: 571-5555) A destination of choice for those seeking a wonderful, Italia menu. The antipasti are robust and delicious, the pastas ar mouthwatering and almost every main course is first-rate. Ad to that a cheerful ambience and delightful service.

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LEGACY
BY EMBRAER

# It's not how many ideas you have. It's how many you make happen.

In 1996, after three years of explosive growth but few changes in its operations or business processes, electronics-retailing giant Best Buy's profitability had evaporated and its stock price was plummeting. The company needed a major—and immediate—transformation. **I am Best Buy's idea, delivered.** Best Buy partnered with Accenture to engineer one of the most dramatic success stories in retailing history. In a two-year program applying process, methods and tools that Accenture calls Scientific Retailing, Best Buy increased net earnings 138% and drove its stock price from $2 to $57, increasing its market capitalization from $403 million to $11.4 billion.

As the global leader in enterprise information storage solutions, EMC recognized that a complete overhaul of its existing business systems was needed to sustain future growth. **I am EMC's idea, delivered.** Accenture teamed with EMC to design and build a massive, scalable information infrastructure to integrate all of EMC's systems and processes globally, accelerate new product introductions and give management more flexibility in responding to changing market conditions. Now, design changes can make the rounds to 6,000 users around the world in minutes, instead of days.

To develop a sustainable competitive advantage in the global chemical industry, Dow sought to aggressively leverage its investment in information technology, dramatically improving systems productivity and significantly reducing application costs and time to market. **I am Dow's idea, delivered.** In a unique outsourcing relationship, Accenture helped Dow consolidate nearly all of its IT activities into four regional centers. Jointly staffed with professionals from both companies, the centers have accelerated time to market by 10%, increased overall productivity by 30% and made a hefty contribution to $70 million in annual IT savings since 1992.

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*There is only one success—to be able to spend your life in your own way.*
—CHRISTOPHER MORLEY

**Bull's-Eye** In Melbourne [last month], 30,000 people demonstrated against Australian support of American plans to invade Iraq, failing to connect the fate of some of their countrymen [in the bombings] in Bali to the need to pre-empt the actions of countries that support terrorism. But such naiveté—the failure to appreciate who the bad guys really are—can't last long. The terror battleground has just extended from the heart of the developed world to what until last [month] was a tropical idyll. There is no choice. Either fully commit to the war against terror, or risk becoming an easy mark.

—*Far Eastern Economic Review*

**Turning Point?** If [Brazil's] president-elect, [Luiz Inàcio Lula da Silva], chooses to emphasize policies that address Brazil's poverty and inequality without jeopardizing its stability, he may blaze a trail for other Latin populists who seek a pragmatic alternative to failed statism. Brazil's inequality is indeed shocking, and it's healthy that the country should elect a candidate who vows to do something about it. [However,] if Mr. da Silva lashes out against economic orthodoxy, he will confirm the worst fears of investors, who will drive interest rates even higher than they are and trigger a messy debt default. This would be a disaster for Brazil, and especially for Mr. da Silva's supporters; hyperinflation and economic disruption usually hit the poor hardest. But if Mr. da Silva announces plans to fulfill his populist mandate by concentrating on education, land reform and pensions, Brazil's prospects will be brighter. There is no reason why caring about poor people should involve abandoning sound economic policies.

—*Washington Post*

*"Tell your assistant it's perfect."*

**Holding All the Cards** An EU-level merger review i a regulatory proceeding, like obtaining a building permit. Withou regulatory approval, there is no merger. In other jurisdictions— most notably the U.S.—merger review is a legal matter. What tha means is that regulators who oppose a merger must take th matter to court, where the presumption of innocence prevails an the burden of proof falls on the regulators to show cause why th merger should not be allowed to go through. Under EU rule the merging companies are, in effect, guilty until proven innocen without regulatory approval, there is no "right to merge," whic means, under certain conditions at least, there is no right to bu or sell private property without prior consent from the state.

If the EU wants a world-class antitrust enforcement regim it needs world-class procedures. That means truly independen and informed oversight, at the very least. Accountability shoul be built into the merger and acquisition review process, rath than coming about only when someone goes to court after a unfavorable decision has been made.

—*Wall Street Journal Euro*

**Good Recipe** Hospitality consists in a little fire, a litt food, and an immense quiet.

—RALPH WALDO EMERSO

**Simple Solution** Most of the accounting issues plag ing corporate America can be traced to the corporate incon tax and the complexity of the code. The code forces many con panies either to relocate to foreign jurisdictions or constru financial structures that few people inside or outside the con pany can comprehend. Corporations are only as complex as t taxes and regulations that govern them. A simple, transpare tax code will yield simple, transparent corporate structure Companies will be easier for investors to understand. Easier f executives to run. Gray areas of the law will largely vanish. A chicanery will be obvious and easily prosecuted. The then should be: Honest, clear, simple accounting in business. Hone clear, simple accounting in government.

—GEORGE GILDER and BRET SWANSO
Discovery Instit

**Friday Whine** Generally I don't socialize with my [wor colleagues—no special reason, except that I much prefer evening watching a movie on television at home to argui about movies or, even worse, reviews of movies, in a room fill with people for whom altogether too much is at stake in t rightness of their opinions.

—JOSEPH EPSTEIN, *Commentary*

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k responsibly. (But you know that.)

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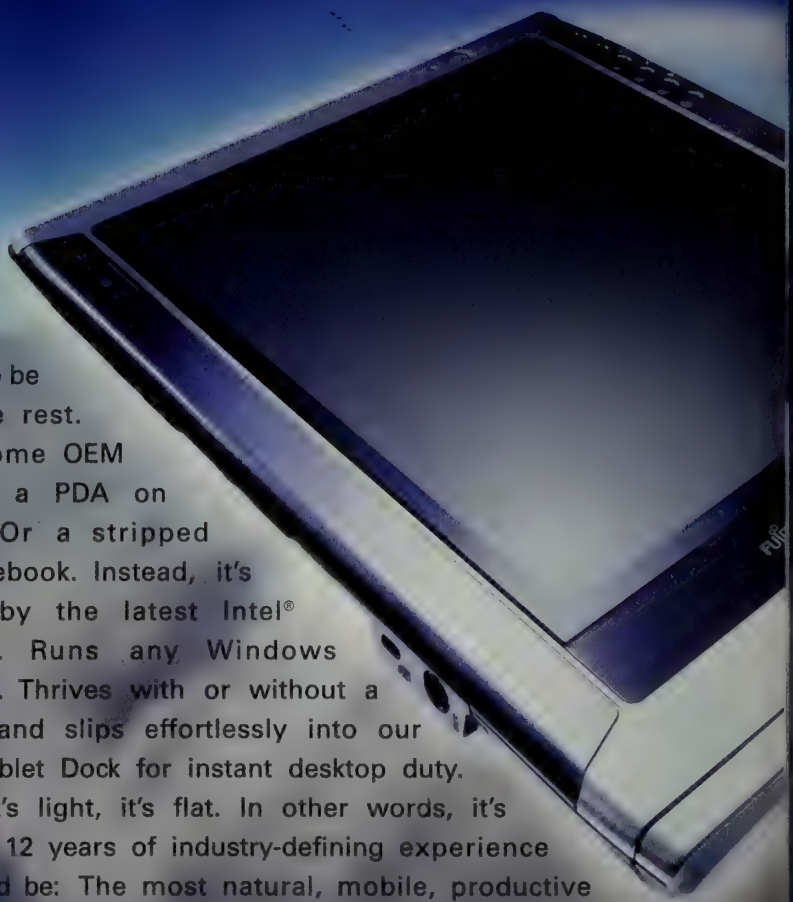

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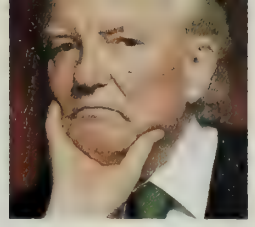
By Paul Johnson



# Ridding the Arab World of Intellectual Poison

THE BUSH ADMINISTRATION IS BEGINNING TO REALIZE THAT destroying Saddam Hussein's regime in Iraq is merely the first step in a needed general reconstruction of the Middle East. In approaching this task it is important the Administration realizes the role anti-Semitism plays in the area's turbulence.

Anti-Semitism is the result of the oldest of the world's irrational explanations of why things happen. Like Marxism and Freudianism, it posits one big, simple cause of human behavior that is loosely defined and vague enough that all events, especially malign ones, can be fitted into the theory. Where Marxism used class warfare and Freudianism infantile experience bottled up in the unconscious, anti-Semitism uses a gigantic, worldwide conspiracy of Jews.

Anti-Semitism first emerged in the 3rd century B.C. in Alexandria, where the ruling Greeks blamed the Jewish minority for everything that went wrong. It has been acquiring new archeological layers—with constantly updated anecdotes, myths, pseudo-facts, hate figures and folklore—ever since.

## Source of Hitler's Hatred

Many rival and conflicting attempts have been made to explain the phenomenon of Adolf Hitler. The most convincing—and the evidence for which is to be found in Hitler's *Mein Kampf*—is that he was a product and a victim of anti-Semitism, a mental disorder that in its extreme form causes human beings to do quite irrational and horribly violent things. Hitler was perhaps the most virulent anti-Semite ever. His capacity for hatred, combined with his remarkable willpower and astuteness, posed an enormous danger, not only to Jews. Hitler believed the German "master race" required "living space" in the east. His willingness to provoke world war in order to secure such space was heightened by his belief that, under cover of such an event, his plan to exterminate all Jews could more easily be carried out.

Hitler's overpowering hatred came from many sources, probably the most important of which had its origins in a political satire published in 1864 attacking Napoleon III's regime in France. It had nothing to do with the Jews. Some thirty years later, however, the Czarist secret police translated this propaganda pamphlet into its modern form, the *Protocols of the Elders of Zion,* making Jews the villains. This text circulated widely before World War I. It got a second lease on life with the Bolshevik revolution: The prominent role played by Russian Jews such as Leon Trotsky made the idea of an international Jewish conspiracy seem more plausible.

Early in its history the *Protocols* was shown to be a complete fraud. But those who fell for it didn't listen to the truth; the *Protocols* provided them with a detailed explanation for everything that was wrong with the world and with their own lives. They wanted to believe in it, and they did—utterly.

Hitler had a particular reason to believe. He had joined the German army to fight for the cause of securing that living space in the east—in Poland and Russia. He had fought hard and gallantly. Germany won the war on the eastern front overwhelmingly, but in November 1918 the new German Republic negotiated an armistice with the Allies, depriving Germany of all its eastern gains. Hitler heard this dreadful news in a hospital, where he was recovering from wounds. In a flash of light he saw the truth: The treacherous peace had been negotiated by the Jewish conspiracy to undermine the German race. This belief was the spur to all his subsequent actions.

## New Anti-Semitic Epicenter

One of the consequences of World War I was the increased immigration of European Jews to Palestine. This ignited the Arabs' dormant hatred of Jews, making them natural allies of Hitler. The notorious Grand Mufti of Jerusalem, godfather of Arab terrorism, became a Hitler disciple, fomenting pro-German sympathy and unrest throughout the region. In 1941 the British had to put down a pro-Nazi military coup in Iraq.

The Middle East became the new epicenter of Jew-hatred. For the last half-century key texts such as the *Protocols* and *Mein Kampf,* as well as locally manufactured tales of Jewish conspiracies, have circulated in all Arab countries. State publishing firms and state radio and television spew a steady diet of poison attacking the Jews and anyone else who can plausibly be associated with them. In recent years there has been a growing output of anti-American propaganda so that anti-Semitism and anti-Americanism are now intertwined in the minds of many Arabs. This is the poisoned soil from which suicide bombers and al Qaeda have sprung. (It should be noted that even in Europe anti-Semitism and anti-Americanism are now muddled together.)

Weapons of mass destruction—whether nuclear, chemical or biological—might have been made for just such an irrational and senseless fury as Jewish conspiracy theory generates. Devising an antidote to it in the aftermath of Saddam's overthrow must, therefore, be one of the principal aims of American policy. This will require careful and subtle thought. The de-Nazification of post-war Germany and the cultural re-education of Japan under General Douglas MacArthur are useful precedents. But it is clear that military victory and political reconstruction will not be enough. F

Forbes.com

**Paul Johnson**, *eminent British historian and author;* **Lee Kuan Yew**, *senior minister of Singapore; and* **Ernesto Zedillo**, *director, Yale Center for the Study of Globalization, former president of Mexico, are now periodically writing this column in addition to Forbes Chairman* **Caspar W. Weinberger**. *To see past Current Events columns, visit our Web site at* **www.forbes.com/currentevents.**

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Rich Karlgaard, PUBLISHER

# America's Worst C-Title Job

/HAT ARE THE TEN MOST REVOLTING JOBS IN AMERICA? enth-worst is issuing tickets at an airline counter. Ninth is owel-changer at a sex club. Eighth reports to Jerry Jones, Iarvin Davis or Martha Stewart. Seventh is the nurse who oks for colon polyps. Sixth is a cab driver in New York City. ifth is elephant-poop scooper for Ringling Bros. Fourth is head f tourism for North Dakota. Third cuts Donald Trump's hair. ny slaughterhouse job is second.

Holder of the number one worst job in America: the CIO.

Pity the chief information officer. In corporate crack-the-hip, this job snaps the sound barrier. Let's take a trip down nemory lane and review the last 12 ressful—no, bitter—years of being CIO in America:

**1990.** Business is threatened by ecession and Japan. White papers re urging nervous CEOs to realize at salvation lies in Deming Prizes, Ialcolm Baldrige Awards and just-n-time inventory. Clickety-clack, lickety-clack, comes the sound of llen Edmonds loafers. The CEO is unning down the hall—toward you! Breathless, he looms efore you, saying, *"What are you doing, my narrowly geeky CIO, reengineer our corporation? Forget about bits and bytes, man. Drop everything you're doing. Make our old denture-breath company six-sigma ... and lean ... and fast! Or you're fired!"*

**1996.** Having worked like a mule, you, the CIO, have not seen our family for six years. But, by golly, you have successfully re-ngineered the corporation! You now can deploy laser scanners nd microcontrollers to detect quality gradations as minute as ve nines, six nines—seven nines! Inventory now moves through our supply chain like prunes through a goose. But hold the hone: Is that the sound of the world shifting? Yes, it is. Some-ning called Amazon.com has just gone public. Its market cap is nore than Barnes & Noble and Borders combined! Your CEO is a panic. Analysts are in a froth. Shareholders are carping. Iagazines are calling you a dinosaur. The new threat to your ompany is two college dropouts with $200 million in venture apital. Clickety-clack, clickety-clack, it's the sound of J. Lobb ustom shoes. The overpaid CEO is running down the hall—oward you! Suddenly he looms before you, saying, *"What have ou been doing, my culturally deaf CIO, to get our company on the Veb? We must be Web-savvy! Drop everything you're doing. Make ur old denture-breath company look ... cool! Or you're fired!"*

**1999.** Lord, are you cool! Your Web site is winning awards, and ou lead the league in a crucial metric of the late millennium: nose rings per IT department. The new hipster image is having a positive effect on your company's business—Wall Street now values your old denture-breath company on Web site hits + Mary Meeker citations + number of black mock turtlenecks in the corporate suite. Everybody in your company is getting rich from stock options. Happy days! But what is that? Thumpety-thumpety, pump-pump-pump, it's the sound of Prada squared-toed shoes. The fashionably made-over CEO is running down the hall—toward you! Suddenly he looms before you, saying, *"What are you doing, my head-in-the-sand CIO, about this Y2K problem? My God, haven't you been watching CNBC? The world is going dark on January 1! Ed Yardeni says so. Our insurers say so! Drop everything you're doing. Make sure we are in business on Jan. 1. Or it's your hide!"*

• **2002.** The threats to your business are recession and Wall Street jitters. All your customers have applied Lomotil to their cap-ex spending. So you must, too. Of small consolation is that your attention-deficit-disordered CEO will not be pestering you with this year's fad, because he's at Lompoc serving three to five. What, then, is it that you're hearing? Clickety-clack, clickety-clack, it's the sound of Kmart wingtips with cleats. The CFO—*the CFO?*—is running down the hall—toward you! Suddenly he looms before you, saying: *"What are you doing, my vendor-bribed CIO, to save our company money? We must cut IT budgets ... cut, cut, cut! Drop everything you're doing. Everything! Go back to '98 budgets—1898! Or you're fired!"*

• **2004.** Saddam is pushing up tulips; Paul O'Neill is retired; and, at last, the economy is heating up. The GDP is humming at an annual growth rate of 5%. The Dow is over 12,000; Nasdaq is over 3000. Animal spirits are back. Corporate horizons have expanded from three days to three years. Whishity-whish, whishity-whish, it's the sound of slippers (prison slippers, perhaps); the CEO—*He's out already?*—is sliding down the hall—toward you! Breathless, he looms before you, saying, *"What have you been doing in my absence, my hesitant CIO, to position our company for growth?"*

*"Not a darn thing, sir. I've been cutting budgets. To the bone. To make our numbers. To please Wall Street. To make sure you had a job when you got out of the clink."*

*"Thank you very much, my loyal servant. Of course—this time you're really fired!"* **F**

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JANUARY 21, 2002

## No Way Out

DUKE ENERGY SEEMED TO HAVE A WINning strategy earlier this year. Chief Executive Richard Priory was acquiring pipelines and power plants outside of North Carolina and building a multibillion-dollar trading operation around them. But even Priory couldn't escape the meltdown in the energy industry. Duke took a $319 million third-quarter writeoff, some of it in its merchant power business. The Securities & Exchange Commission is investigating its trading desk, and Priory is now predicting flat earnings next year instead of double-digit growth. The stock is down 50% this year.

*—Daniel Fisher*

APRIL 15, 2002

## Hire-Wire Act

MAVERICK GRAPHICS CHIP MAKER NVIDIA has had a rough time since our April story. We wrote that the company was taking a huge risk when it decided to pair up exclusively with Advanced Micro Devices rather than Intel for its new chipset, called Nforce. Nvidia had been counting on Nforce to supply 30% of its 2003 sales. Instead, weak retail sales have forced the company to take a $21 million inventory writedown, partly on Nforce chipsets.

On top of that, the little Santa Clara, Calif. outfit is tangling with behemoth Microsoft over its agreement to supply chipsets for the Xbox game machines. Nvidia's innovative chipsets buttress a computer's microprocessor, helping it churn out stunning animation and rich surround sound audio. Microsoft argues that it overpaid Nvidia by $46 million. The spat is in arbitration. For now, Nvidia is counting on its NV30 graphics chip to rev up demand and help it gain back ground lost to arch rival ATI Technologies. *—Elisa William*

APRIL 16, 2001

## Briefed

"MERINO BIKINIS, ANYONE?" IS HOW W concluded our story on wool sportswea maker Ibex. We were trying to be funny but Ibex has done us one better. Th Woodstock, Vt. outfit now offers merin wool jockey briefs. Called "Roasters, they retail for $28 a pair and promise t keep you warm under the most frigi conditions.

Claims Ibex founder John Fernsel "People buy six or eight pairs at a time Some people, that's all they wear." Ibex i still tiny, with revenues of just $2 millior up from $1 million when our story rar Not bad in a recession. Distribution i also expanding—160 retailers now carr Ibex's wool ski clothes versus 100 tw years ago. *—Daniel Lyon*

## Flashbacks

70 YEARS AGO IN FORBES/APRIL 1, 1932

**All Tax, No Action** The most serious evil besetting this nation is neither prohibition nor crime; it is unbearable taxation. Taxation has ruined more than one nation, ancient and modern. Unless arrested, it will ruin our own nation. Taxes have shamefully outrun national growth, national wealth, national prosperity. Tax eaters have multiplied shockingly faster than tax payers. We are being taxed to the point which gravely handicaps the rebuilding of prosperity.

20 YEARS AGO IN FORBES/JANUARY 4, 1982

**Ashtray Economics** Not only do people get upset when you kill the goose that laid the golden egg, they get scared when you go anywhere near it. So it is with the tobacco industry's fear of Uncle Sam's proposed new tax on tobacco products. What really worries the industry is the principle of large tax increases. But according to Peter Enderlin of Smith Barney, "The price elasticity of demand for cigarettes is very low. Generally a 1% increase in pric will reduce demand by 0.4%, all other things being equal." Usin those calculations, the proposed tax would at most reduce deman by 4% or so. Maybe cigarette company executives just like to worr It's good for business.

*With the price of a pack of cigarettes topping $4 in many state cut-rate cigarettes now command 8% of the market, up from 3% ju five years ago.*

15 YEARS AGO IN FORBES/JUNE 29, 1987

**Guarding Against Stock Fraud** Can the goverr ment do more about securities fraud without tying up the capit markets in red tape and hampering their efficient functioning? C course it can. Certainly, much of the deregulation of the market has been for the best so far as the economy is concerned. Anywa new laws are not what is needed. More vigorous enforcement existing laws would do the trick. There is something wrong with situation wherein rampant fraud is practiced with impunity. In th area of protecting the small and the not-so-small investor fro outright con men, the SEC is falling down badly.

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By James B. Twitchell PROFESSOR OF ADVERTISING, UNIVERSITY OF FLORIDA; AUTHOR FORTHCOMING BOOK, *Branded Nation*

# The Branding of Higher Ed

## Universities say they hate magazines' best and worst rankings. Oh, really?

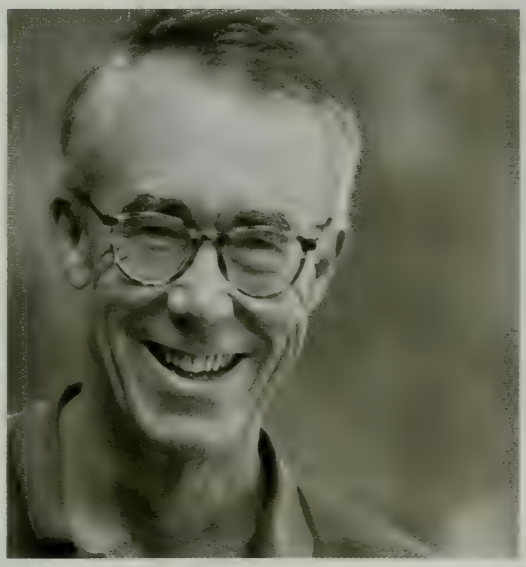
IF YOU ARE EXHAUSTED BY THE FRANTIC PACE OF THE for-profit markets and yearn for the tranquility of the nonprofits, yearn again. Nonprofits are experiencing calamitous times. And not because money is short. The problem that colleges, churches and museums are experiencing is excess supply. There are simply too many college classrooms, too much gallery space and too many pews.

A central doctrine of Marketing 101 is that when a market is oversupplied with interchangeable products, branding behavior starts. If you can't demonstrate intrinsic differences between fungibles, you have to concoct differences. Think bottled water. You drink Evian's advertising, not the fluid.

Don't believe me? Ask the Guggenheim Museum and Smithsonian what Armani clothing and *Star Wars* memorabilia are doing deep within their hallowed halls or ask your local minister why the nondenominational megachurch down at the mall is offering shame-free services complete with support groups for soccer moms.

My own business—higher education—is doing the same sort of thing. But there's a twist here. Most universities are sheep. They're branding themselves in only one way: to get the highest ranking possible in the annual college ratings done by *U.S. News & World Report*. What a shame. And what hypocrisy. If you ask academic administrators about the rating systems they will become apoplectic. "We won't pander to some newsmagazine's idea of what we should be offering," they will say. Then they will furiously try all kinds of harmful strategies to do better in the ratings, especially by looking highly selective. It's called massaging the yield—the percentage of accepted students who then enroll. To ratchet up that number they adopt early-decision policies (which bind kids to the school), accept upper-level transfers and even refuse qualified candidates who they suspect will go elsewhere.

As Rachel Toor, a former admissions officer at Duke University, says in her book *Admissions Confidential*: "I travel around the country whipping kids (and their parents) into a frenzy so that they will apply. I tell them how great a school Duke is academically and how much fun they will have socially. Then, come April, we reject most of them." After all, the best kids will probably go elsewhere, and we can't have that ruining our yield number.



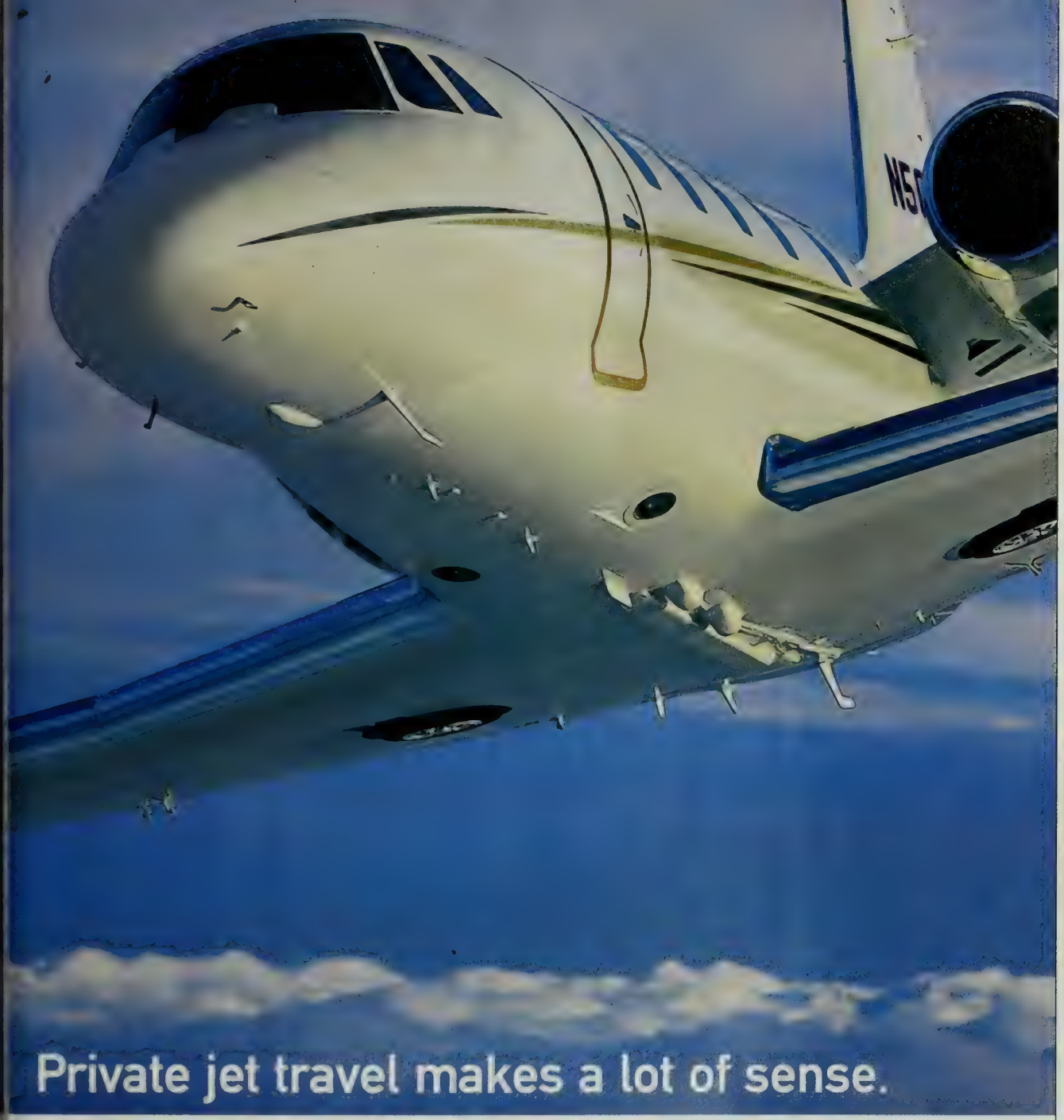
*"Most universities are sheep. They are branding themselves in only one way: to get the highest ranking possible. What hypocrisy."*

Meanwhile, schools will overlook funding the library and teaching staff in order to increase spending on what are now called "competitive amenities" like deluxe dorms and grandiose athletic facilities. Who cares if most of your teaching is done by adjunct faculty or graduate students? And who cares about the curriculum? You need to brand by looking good in those ratings.

Even the seemingly endless pledge drives, essentially perpetual begathons, are couched in terms not of excellence but as a way to improve ranking. So the University of Richmond named one of its campaigns Top Tier Initiative. From a branding point of view that makes sense—you get points in the rankings for big endowments. If you want to see where the money goes, look at the new mutant of the college catalog sent to prospective students. It's appropriately called a view-book, a glossy brochure that often costs the schools a dollar a pop.

If universities want a more realistic way of branding themselves they should release statistics gathered by the National Survey of Student Engagement (called Nessie and funded by the Pew and Carnegie foundations) about how consumers—whoops!—students really feel about their higher education experience. That the elite schools keep these meaningful figures to themselves is eloquent acknowledgment of how anxious this market really is.

What's the solution? Quit providing the selectivity numbers. Spend money on the intellectual plant—the library, medium-level professors' salaries, smaller class size. Dramatically shrink expensive graduate programs when their only purpose is to provide cheap teaching assistants and maintain high rankings in fields for which there is no job market. Stop the arms race! There are plenty of empty seats available at perfectly good schools around the country. If the upper-tier universities were really committed to education they would direct our attention to where it belongs: K-12 is going up in smoke. F





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# OUTFRONT

## Capital Punishment

**The boom gave rise to hundreds of new venture capital firms that collected obscenely rich fees. Postbust, howling investors think most of them should die | BY ERIKA BROWN**

MARK YUSKO GOT SO FED UP with the "egregious" fees he was paying to venture capital firms that he flew out to Silicon Valley earlier this year to corner a bunch of them. Yusko, chief investment officer of the University of North Carolina at Chapel Hill, had watched $130 million in venture money sink to $85 million since March 2000. After he and other investors complained, two firms trimmed their fees. Another four shrank the size of their funds, which reduced their fees, as well.

"It was a good start," Yusko says.

And now it is accelerating. The venture world is reeling from its rotten investments. Limited partners are bailing out, demanding cheaper fees, insisting on outright refunds—and even violating nondisclosure agreements to go public with just how bad some funds have performed. The atmosphere has gotten so poisonous that some VCs are buying liability insurance against negligence lawsuits, says James Topinka, a San Francisco lawyer with Coudert Brothers. No high-profile suits have been filed—yet.

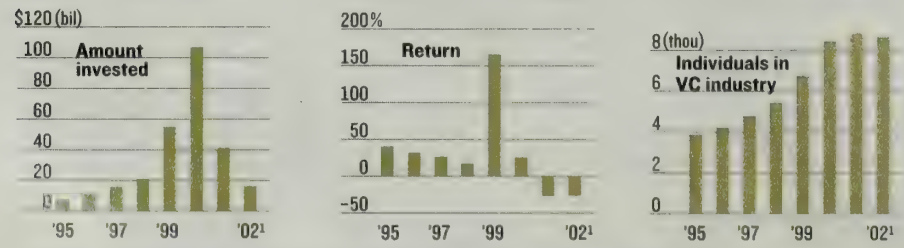
Hordes of amateurs converted to venture capitalism in the tech boom, joining hundreds of veterans in reaping big fees for taking big risks. VCs line up upfront commitments for a big pot of money from their limited partners, who are then obligated to dole out the cash in stages, called capital calls, over the life of a fund—up to ten years. In the meantime the VCs collect management fees of 1% to 2.5% of the huge committed total, ev though the VCs invest it only gradually.

The average fund has doubled more than $130 million since 1995. Son firms have commanded far bigg increases: Battery Ventures raised a $1 b lion fund early last year, up from $ million raised in 1994. Yet VCs ha continued charging the same fee rat as before, reaping hundreds of m lions of dollars each year—ev though, these days, many VCs do lit more than twiddle their thumbs at a pile of cash.

Some $90 billion of the $252 b lion under management today is st on the sidelines, committed investors but not yet placed

### Venture Crunch

Returns are way down, but the VC population hasn't budged. That will change.




[1]Through September. *Sources: National Venture Capital Association; PricewaterhouseCoopers; Thomson Venture Economics.*

ıe venture firms. New investments ı startups, which peaked at $9 billion in arly 2000, totaled only $1.2 billion in the second quarter of 2002. In the same quarter VCs raised $1.8 billion, and returned even more, $2.7 billion, the first time ever this has happened. Portfolios are constantly being written down with no hope in sight of getting their dogs to market. In 1999 annual returns to venture funds were 166%. This year? –27%.

**Mark Yusko, chief investment officer at UNC-Chapel Hill, wishes the "tourist" VCs would pack it in and let the pros take over.**

But precious few VCs are packing it in. Some 8,700 exist today, up ninefold since 1980. "Less than a third of them deserve to exist," says Michael Gutnick, who manages the $1.7 billion endowment for Memorial Sloan-Kettering Cancer Center in New York City, which puts 10% of its money into venture. He got ten VC pitches a month during the bubble, mostly from rookies. "They know they'll never get another fund. What incentive do they have to return the annuity, other than ethics?" he says sarcastically. "They'll milk it till ıe end for the fees."

VC results have long been secret, but ı October Robert Boldt, chief of the 'niversity of Texas pension fund, :vealed returns for his entire $1.3 bil-on private equity portfolio, including 243 million in VC investments. A local ewspaper demanded the data under ıe Freedom of Information Act, and ıe pension fund—who had fought ıch requests before—finally relented. oldt even posted the shameful num-ers on the pension fund's Web site.

A sampling: Austin Ventures VII 26%; Crescendo Ventures IV, –46%. Cs argue the figures are meaningless; ınds always start off low and spike up ter when companies go public or get acquired. Boldt's VCs threw a fit; a handful of them blackballed him, telling him his money wouldn't be welcome in their future funds. But he makes no apologies: "Venture has always been a very clubby industry. We thought we should reconsider what we disclose to the public." Charles River Ventures is fighting to avoid the same kind of leak by the Massachusetts state pension fund.

Robert Pavey, a 33-year veteran with Morgenthaler Ventures, one of the funds blasted on the pension fund's site, says such stunts are to be expected. "If younger VCs are going to brag about returns when they're good, they have to expect people to throw them in their faces when they aren't."

In addition to pushing for fee reductions, investors also are trying to recoup the far bigger "carry" fees. The biggest payoff for venture firms comes when the upstarts they back get sold or go public; the VCs pocket 20% to 30% of the proceeds and distribute the rest.

Now limited partners are invoking "clawback" terms. A clawback forces VCs to return any carry fees collected on individual home runs if the fund, overall, ends up in a loss. For funds started in the boom, the big payouts came early. If the slump continues, hotshot VCs are looking at some serious claw marks.

VC Kevin Landry, chief of Boston-based TA Associates, already is digging into his pocket. In August he returned $38 million to limited partners. "We didn't want to end up with a huge payback if the world should end in ten years," he says.

Charles River Ventures cut its fund size from $1.2 billion to $450 million in May, and retroactively adjusted its 2.25% fee to apply to the smaller amount. Over the fund's ten-year life, the firm will forgo $170 million. OVP, a fund in Kirkland, Wash., is halting all fees for its current Fund V until returns are positive again. Says OVP investor Joseph Nelson, who manages the $130 million endowment at Kenyon College: "This was the right thing to do." F

## WARNING: Don't Try This at Home

The surprise box office hit of the fall is *Jackass: The Movie*, a puerile (and profitable) documentary of senseless pranks involving alligators, bottle rockets and other items. But young men with video cameras are not the only ones who can pull off reckless stunts. You may soon witness these.

### AIRLINE EXECUTIVES

They landed a $15 billion federal bailout a year ago. Now have to wring another $4 billion from Congress—while maintaining it's not a bailout.

*Degree of difficulty:*

### CHARLES ERGEN

He failed to convince federal regulators that combining his EchoStar and GM's DirecTV wouldn't create a monopoly. Now has to figure out how to avoid paying a $600 million breakup fee for the botched deal.

*Degree of difficulty:*

### STEPHEN CASE

After ruining Time Warner shareholders by persuading them to hook up with his not-so-profitable AOL, he has to ... keep his job.

*Degree of difficulty:*

### WORLDCOM EXECUTIVES

They have overseen the largest bankruptcy in history. Now they've got to distribute $25 million in bonuses—while keeping a straight face.

*Degree of difficulty:*

### HARVEY PITT

Must survive an SEC investigation of charges that his choice of William Webster to oversee accountants was completely inept. If he is cleared, he should get that raise he wanted.

*Degree of difficulty:*

*—Peter Kafka and Doug Donovan*

# How to Spell Relief

**Why Peter Munk should walk away from his failing bet on Chicago's Sears Tower.**

How much crow can one man digest? Over the last two years Peter Munk has apologized to investors in his real estate investment trust, Trizec Properties, for a disastrous $540 million investment in a Hollywood entertainment complex. And he's admitted to $28 million in mistakes in developing shopping centers in Las Vegas and eastern Europe. Trizec's share price has dipped 70%, to $10, cutting $70 million from his own net worth.

In what could become his latest humiliation, Munk is now under pressure to let go of Trizec's flagship investment—and America's tallest building—Chicago's Sears Tower.

The problem is leverage. Munk's 1997 investment in the tower was made, in effect, on 90% margin. Betting its value would rise past $1 billion, Trizec paid $70 million up front for control of the building, planning to become its owner on Jan. 1, 2003 by assuming an $800 million mortgage owed to Metropolitan Life Insurance.

Uh-oh. While most skyscrapers have recovered their perceived pre-Sept. 11 value, the 3.5-million-square-foot Sears Tower is struggling. Rents—now $25 a square foot—are down, and with them, the building's value. James Sullivan at Green Street Advisors in Newport Beach, Calif. figures the building might be worth less than the principal Trizec will soon owe.

A modest proposal: Walk away. Or threaten to—maybe that will put MetLife in the mood to renegotiate. The 9.2% interest rate the insurer is charging on its mortgage is usurious; sub-7% mortgages are common now. If MetLife balks, Munk can simply hand over the keys with no further punishment. By ditching the 28-year-old building, Trizec, with high leverage of 68%, cuts its liabilities to 63%, edging closer to the industry average of 51%.

Says Trizec's spokesman: "It's a terrific building, but we expect to look at our options." Right. Take the hit—and hold that order of crow.

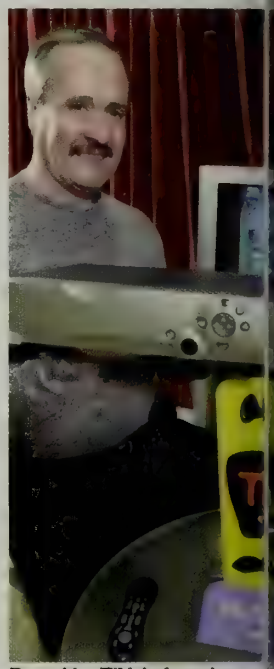
*—Stephane Fitch with Penelope Patsuris*

# Do You TiVo?

**TiVo singlehandedly created the market for digital television recorders. Profits don't go with that accomplishment | BY DOROTHY POMERANTZ**

THANK GOODNESS FOR PIONEERS. Someone had to open the West, invent FM radio and develop the digital TV recorder market. But the hardy souls who break new ground don't always fare well.

Read the despairing disclosure statement for an October financing for TiVo Inc., the Alviso, Calif. pioneer in TV recording. The 11,200-word confession explains that the company will probably continue to lose money "for the foreseeable future." The stock, once at $79, is down to $4 and change.



**Boxed in: TiVo's founder, Michael Ramsay.**

TiVo's gadget allows a TV addict to digitally capture a show for later playback. The system beats the old-fashioned VCR because (a) it's easy to program—it knows when your favorite show is on—and (b) it lets you fast-forward through annoying ads. Great idea, but TiVo has nearly killed itself persuading consumers ju how great. So far the company has racked up half a billion dolla in losses while winning a mere 464,000 subscribers. It takes sor heavy salesmanship to get people to pay $300 for the recordi device plus $13 a month for the digital signals that provide pr gram times and thus tell the box when to start recording.

"TiVo did the heavy lifting. Now I think they're going flame out," says Manu Mehta, the founder of Metabyte N works, a small (less than $1 million sales) Silicon Valley out that has big plans to knock TiVo off its perch. Metabyte, fund in part by Scientific-Atlanta, sells software that helps TV view digitally record from an on-screen menu, much like TiV Metabyte has a deal with Scientific-Atlanta to put his software new boxes that AOL Time Warner's cable unit is alrea installing in Rochester, N.Y., Green Bay, Wis. and Austin, Tex.

The greater problem confronting TiVo, like other consum electronics pioneers before it, is that by working so hard to pr mote its brand while also educating consumers about what does, it sowed the seeds of its own destruction. Upstart co petitors, including Sonicblue's ReplayTV, Paul Allen's Dig and a digital recorder offered by the EchoStar satellite servi have been able to throw their knockoffs into the market t TiVo spent so dearly to create.

Since its inception in 1997, TiVo has spent $178 million sales and marketing, more than twice the $79 million it spent

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ike investment banks, Neuberger Berman wasn't created to underwrite stocks. For over 60 years, ve specialized in one thing: managing money. Why is that important? It means there are no hidden ndas when we buy or sell stocks for you. It means there are no distractions, either: we spend all our e sweating every detail of your portfolio, whether it's $500,000 or $50 million. And, mostly, it means can help you realize your dreams. Not to mention your children's dreams. If you have a minimum of 0,000 to invest in a customized portfolio, and would like a free brochure on money management, call .232.4859. Or, for more information and a list of our offices across the country, visit us at nb.com.

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R&D during the same period. The money went into such things as the "TiVo, TV Your Way" 2000 national advertising blitz.

The good news is that direct marketing outlays—meaning rebates and some television advertising—have dropped, from a peak of $102 million in 2000 to $29 million last year. The bad news is that something else called "sales and marketing—related parties," jumped 41%, to $76 million last year. Add it up, and TiVo has spent $767 to win each of its 464,000 subscribers.

The related parties are the myriad partners TiVo has aligned itself with to help promote its brand: AOL Time Warner, DirecTV, Philips, Sony, Creative Artists Agency and so on. But these folks don't do anything for free. In the past TiVo has had to expense the cost of the cobranding, either in the form of direct subsidies, or as a noncash charge to amortize stock and warrants issued in return for services.

As a model for future deals, TiVo has agreed to give up a substantial chunk of its subscription fees to its largest partner, DirecTV, in exchange for hyping the service. These fees are the company's largest source of revenue and second-most-profitable business, behind technology licensing, and are expected t account for 62% of $61 million in sales for the fiscal year endin next Jan. 31, according to Matthew McCormack, an analyst wit Friedman, Billings, Ramsey & Co.

But these revenues are especially shaky if TiVo finds itself i a price war with the upstarts. The company has to share th same percentage of subscription revenues with its partners, irre spective of whether it's practically giving the service away.

For now at least, TiVo's 52-year-old Scottish chief executiv Michael Ramsay, is nonchalant about the competitive threat an the price he has paid for creating a new service.

"It's nonsense that the pioneers are the ones who get th arrows in their backs," says Ramsay. "Like many small compa nies, we've had our challenges with growth and all the thing that have impacted companies because they can't rais capital. But we've weathered the storm and become higher-profile company than when we came in." Investor though, don't want profiles. They want profits. F

# Good Walk Spoiled

## Insurance giant Nationwide must wish it never heard of Jack Dean Franks and his golf course | BY RISHAWN BIDDLE

Sand trap: Franks in happier times before his desert golf course project collapsed.

WHEN HE WAS arrested in October by agents from the Federal Deposit Insurance Corp. and the FBI for his role in the collapse of a $100 million, 1,000-acre golf course development in ritzy La Quinta, Calif., Jack Dean Franks had already loaded his white SUV with suitcases and his wallet with pesos, the better to make a quick run across the border to his Mexican hacienda. Instead of entertaining guests in his 32-seat dining room, he now awaits trial in a Santa Ana jail.

Franks' arrest brings an end to his latest attempt to shake his past as a twice-convicted white-collar felon (FORBES, *Oct. 29, 2001*). But it couldn't have happened soon enough for Nationwide Corp., the mutually owned insurance giant whose publicly traded affiliate, Nationwide Financial Services, sank $29 million into Franks' development.

Now Nationwide Corp., which has taken over most of its affiliate's interest in the project, is putting another $27 million into reviving the deal. But even as it tries to salvage its investment, Franks casts a long shadow. Besides the embarrassing admission that it failed to turn up Franks' past misdeeds, Nationwide is trading accusations with the home builder who hooked it up with Franks.

Nationwide accuses Grant Hornbeak, whose daughter is married to the son of a Nationwide executive, of conspiring with Franks to siphon off $6 million i investor funds for his own improper us Nationwide's fraud charges are echoe in part in a separate lawsuit filed again the pair by 68 limited partners. Amor other allegations, the lawsuits claim th Hornbeak overspent his golf course bu get on an additional hole so as to boo the value of some of the 120 adjace home lots he controls.

Turning the tables on Nationwid Hornbeak filed a countercomplaint th accuses the insurer of "deceit" and "ma ice." He claims Nationwide agreed indemnify him against any liabili related to $69 million in loans and sure bonds he personally guaranteed, th reneged in "a fit of chutzpah."

Retorts Nationwide's attorney, A thony Ciasulli: "This is such b.s."

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▲ Brian Connor/Account Manager

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# Family Affair

**David Dunn's technology bets have made a small fortune for himself and the Bass brothers. Now he may get a little richer—from a side bet on his son** | BY SETH LUBOVE

**Dunns, with customer; early baby soda bottles, new teether ball.**

A 17,000-SQUARE-FOOT MANSION perched on six acres of cliffside property in La Jolla, Calif. Sweeping views of the Pacific Ocean. A collection of Rodin bronzes. Three wives, all named Marilyn. Such are the rewards of venture capital success for David Dunn, 72. Beginning with just $8 million in 1971 from the Bass brothers—still his only outside investors—Dunn's Idanta Partners has returned over $600 million to the Basses and his firm, while retaining another $200 million in capital. His big hits include Storage Technology, Prime Computers and Iomega, where he's still chairman.

His golden touch extends even to his La Jolla mansion. Dunn is asking $41 million for the property, ten times the amount he paid for it in 1989 when the land and a since-demolished house were unloaded by the federal government as part of the savings and loan fiasco. If the home sells at the asking price, it would be the most ever paid for a residential property in San Diego County.

Now, public markets willing, he stands to score again o one of the more unusual investments he's ever made: i his son Steven, 45. Investing $500,000 of his own money i 1991 for what is now a 20% stake, Dunn took a flier on hi son's ambitions to start a baby products company. Tal about high risk. With a flat birth rate and fierce competitio from Gerber, Playtex and the handful of big companie that make bottles, sippy cups and assorted infant sundrie upstarts have their work cut out for them.

But despite Steve Dunn's lack of experience in manu facturing, much less baby products, the Dunns' Munchki Inc. has become a rare success in a tough business. With in vestment bankers knocking on their door and outside ven ture capitalists angling to provide more financing (includ ing the VC firm founded by Starbucks' Howard Schultz), th Dunns are talking about cashing out and taking the firn public. Although the markets haven't exactly been kind t new issues, Munchkin would be a strong contender.

Following the acquisition in April of Johnson & John son's Healthflow brand for an undisclosed amount, Stev Dunn expects the company to earn $5.5 million in preta income this year on sales of $36 million, a 34% increas from last year. He's now expanding into pet supplies.

"The only thing that drives sales is innovation, and that's wha they do best," says Christine Link, a former buyer for Wal-Mar the Dunns' largest account, followed by Target and Kmart.

The younger Dunn, a tennis nut and eclectic art collector wit an M.B.A. from Harvard, had an inauspicious start as a future sippy cup mogul. After his infant daughter kept trying to grab his ubic uitous Diet Coke bottles, Dunn had the inspiration to attach a nip ple onto an empty bottle. That led to licensing deals with Peps Seven-Up and Dr Pepper to slap their logos on plastic baby bottle Self-appointed nutritional watchdogs complained that the faux po bottles would inspire dim-witted parents to feed soda to their ba bies, but Dunn took the criticism in stride and expanded into othe baby knickknacks.

Now Dunn offers 80 items ranging from inflatable bathtubs t toothbrushes, six of which lead their categories against Playtex, Ge ber and other entrenched competitors. He's the top seller of bab utensils at Wal-Mart, thanks mostly to his use of a thermochromi chemical that changes the color of baby spoons to white if the tem perature of the food reaches 103 degrees, a welcome feature for an parent who has accidentally scalded a kid.

Dunn, who dabbled in real estate development and investmen banking before founding Munchkin, has become a tireless invent and now boasts of 31 patents on such items as bottle brushes an teething blankets. On one recent day at the company's Van Nuy Calif. headquarters he shows off his newest creation: corncob hol ers that slide into each other when not in use.

The elder Dunn is not slacking off either. After helping to ste a streak of red ink and falling sales at Iomega, Dunn continues t oversee a portfolio of investments in seven companies while loo ing for new opportunities. But he's mostly bearish for now.

"Frankly, I don't see a lot," he says, soaking up the La Jolla su shine. "I'm negative on the market. It's still overpriced."

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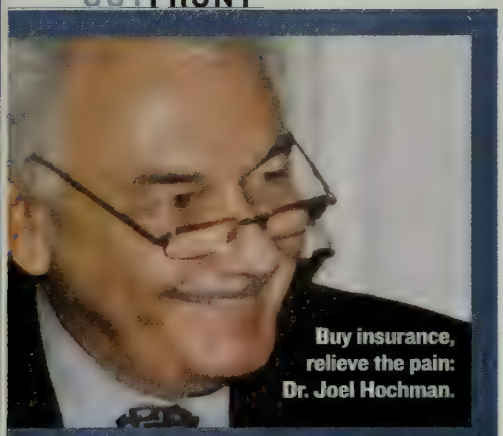

Buy insurance, relieve the pain: Dr. Joel Hochman.

## If You Can't Beat 'Em ... Indemnify

Dr. Joel Hochman says he's fed up with what he calls "pharmacological McCarthyism." He complains that law enforcement authorities are overzealously cracking down on pain medicine specialists because of the illegal use of controlled substances like OxyContin.

So Hochman, a Houston psychiatrist, is fighting back—by getting into the insurance game. He wants to peddle legal cost insurance for pain practitioners. The insurance, apparently the first of its kind, would cover up to $250,000 for criminal defense or defense against losing a medical license. Annual premium: $1,500. Hochman says a London-based company he won't name has agreed to underwrite the insurance. He still needs regulatory approval before offering it.

Hochman has more than a passing interest in all this. In 1997 he surrendered his medical license and Drug Enforcement Administration registration in New Mexico, amid allegations by the state he overprescribed oxycodone (a narcotic) and anxiety reliever diazepam (a.k.a. Valium). He then moved to Texas, where he is a pain-management specialist.

Hochman says he did nothing wrong. "What we're trying to do is make medical expertise meaningful again, instead of abandoning it to criminal prosecutions," he says.

*—Aliya Sternstein*

# The Man With Nine Lives

**Under fire from accounting scandals and charges of self-dealing, Barry Melancon is hanging on as head of the American Institute of Certified Public Accountants** | BY ELIZABETH MACDONALD

FOR BARRY MELANCON, THE 44-YEAR-old chief executive of the accounting industry's self-regulatory body, it's been a terrible year. A wave of accounting scandals has damaged the AICPA's image. On his watch, the AICPA has been accused of giving short shrift to the auditing rules it sets, which are supposed to protect investors. And under Melancon, the AICPA has set up a Web site that ignited a barrage of conflicts-of-interest charges against him.

Some 160 member accountants have signed a petition asking him to resign. BDO Seidman, the fifth-largest accounting firm, has sued the AICPA over the site, alleging Melancon is trying to enrich himself and that the AICPA is wrongfully competing with accounting firms. An AICP member has filed an ethics violation ac cusing him of self-dealing. (None of th AICPA's chiefs, including Melancon, ha ever had a finding against them.) Nov Congress has yanked the AICPA's auditin oversight duties away from it and give them to a new federal board. Some won der how Melancon can hold on to his job

"I think the AICPA under Melancon leadership has been the least effectiv most backward, most obstructionis group that I encountered in my eigh years running the SEC," says Arthu Levitt, former Securities & Exchang Commission chairman. Lynn Turner, for mer SEC chief accountant, agrees. " Melancon were a CEO of a company, he' be fired by now," says Turner, wh recently received a big round of applaus in a speech before 700 accountants whe he called for Melancon to step down.

Part of Melancon's problem is th he's a lightning rod at the worst time f accountants. "Unfortunately, t actions of a few bad ones r flect negatively on all of us he says. But during h term, the things the AICI let slide when t markets were giddy heights are b lieved to have hurt i vestors. For instanc Melancon fought t SEC over audit independen rules that Levi and Turner s would have stopp conflicts involving audito selling consulting services their audit clients. T AICPA also didn't tight rules for simple things, li forcing auditors to pr vide detailed document

CPAs boring? Not Melancon, chief of the top accountants group. He's got folks all riled up.

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tion for an audit or to query lower-level management for problems or even to look at journal entries, says Douglas Carmichael, director of the Center for Financial Integrity at Baruch College in New York. Instead the rules get lazy auditors off the hook by simply letting them obtain a letter from a company that says it isn't faking its numbers, says Carmichael, who notes auditors like weak rules, since they can use them as a defense when sued.

So why doesn't the AICPA boot Melancon? Because he's a business builder intent on making a buck—and that's what its board wants him to do. "Barry brought to the AICPA what the profession wanted: a business approach," says board member Michael Mountjoy. Melancon adds the AICPA has "not reduced one iota the resources" that it puts into standards.

To turn a profit, Melancon launched the site, called CPA2Biz, in February 2001. As chairman of the Web site, he got CPA2Biz the exclusive rights to sell the nonprofit AICPA's products, such as auditing manuals. The products brought in $64 million out of the institute's $165 million in 2001 operating revenue. The AICPA raised $70 million from investors such as Microsoft, Thomson and Aon, which bought half the site; the institute invested just $900 for its 50% stake. While the site has never made a profit, Melancon says the companies are at risk for losses. "In other environments people would be lauded for that," he says.

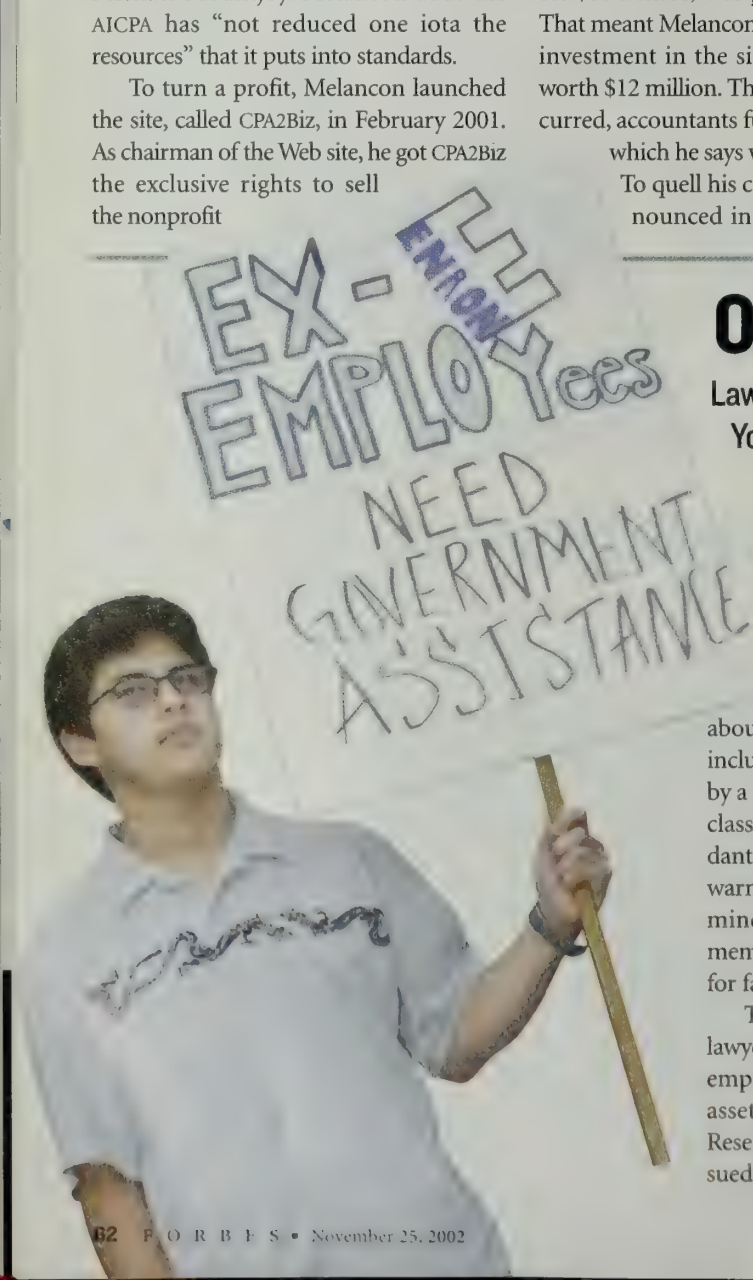
An initial public offering (at a possible $10 a share) was planned for the site. That meant Melancon's personal $100,000 investment in the site could have been worth $12 million. Though no IPO has occurred, accountants fumed over his stake, which he says won board approval.

To quell his critics, Melancon announced in March that he donated it to an accounting foundation.

Even so, Melancon has morphed th once-venerable AICPA into a pai endorser of its financial backers' proc ucts, some of which were denounced a inferior by accountants, like Microsoft small business accounting softwar which was eventually killed. And th AICPA gave a contract worth millions to Thomson unit for exclusively administer ing an electronic version of the CPA exam Though that raised the ire of the Texa State Board of Public Accountancy, it no says Melancon has since convinced it th the unit was the best outfit for the job.

While the board says it is behind i man, Melancon hedges whether he wi renew his five-year contract when his se ond term expires in 2005. "We we through a hard year," he says.

**"If Melancon were a chief executive officer of a company, he'd be fired by now."**




# Open Season on 401(k)s

## Lawyers are lining up to sue employers with thrift plans You can thank Enron—and the Department of Labor.

BY BRETT NELSON

EVER SINCE ENRON'S RANK AND FILE WATCHED $1.4 BILLION C Enron stock held in its 401(k) plans go up in smoke, liabili claims under the Employee Retirement Income Security A (ERISA) have caught fire. Lawyers have filed 115 suits against 3 companies claiming employees' 401(k) plans got shafted.

Now it looks like the corporate suite has even more to wor about. At least 22 new cases are in the works against big companies—including AOL Time Warner, Qwest and Procter & Gamble—buoye by a 61-page legal brief filed by the Labor Department in support of class action by Enron employees. A critical issue is whether defe dants, including former chairman Kenneth Lay, had an obligation warn the savings plan members of Enron's troubles. The DOL did n mince words, stating that fiduciaries—compensation-committe members and the officers who appoint them—are indeed responsib for failing to adequately monitor their plans.

The brief, which clarifies existing law, is red meat to plainti lawyers. Most vulnerable are companies that offer their own stock employees in a 401(k) plan. At the end of 2000, 19% of all 401( assets were in company stock, according to the Employee Bene Research Institute. Corporate lawyers worry that executives will g sued merely because their stock falls hard after a weak quarter. Con

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panies that don't offer stock are exposed, too. One scenario offered by Mark Ugoretz, president of the ERISA Industry Committee, a lobbying group for 120 publicly owned firms: A company offers a mutual fund in its 401(k) that performs badly; employees sue the employer for failing to monitor. Or, how about a case in which two companies merge and drop the less generous of the 401(k) plans? "You've got a recipe for more litigation," says Washington lawyer Stephen Saxon.

An idle scare? Maybe not. Lynn Sarko, lead counsel for the Enron suit, points out that a plaintiff's burden of proof is much lower unde ERISA than under securities law: "You don't have to prove [fiducia ries'] evil intent; you just have to prove they didn't do their job."

Yet more reason for fiduciaries to sweat: A new bill in the Sen ate could put them on the hook for covering additional damages say, the pain and cost of going back to work. Insurance companie see what's happening, says broker Willis Group. The annual pre mium for fiduciary liability insurance for a company with $1 bil lion of its stock in its plan is $750,000—up 200% in one year. ■

# What the Royals Are Reading

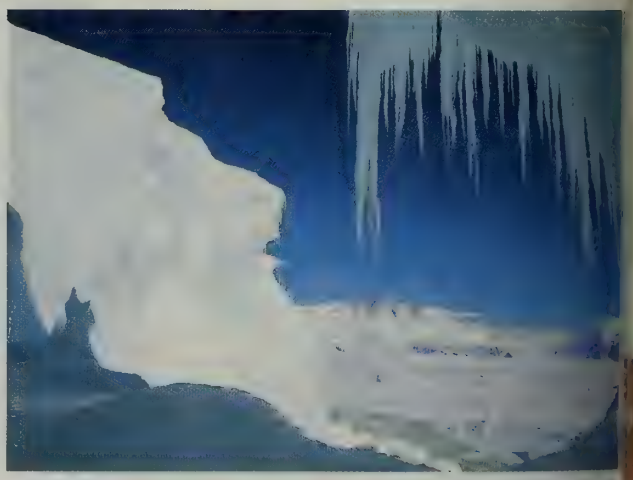
## Hint: It costs $2,900 and a seabird is the main character | BY SUSAN ADAMS

What book do Prince Charles, the Grand Duke of Luxembourg, Princess Patricia von Hohenberg of Austria, Her Majesty Queen Noor of Jordan and Prince Bernhard of the Netherlands all have in their libraries? No, it's not *Who Moved My Cheese*? It's *Antarctica*, an oversize, limited-edition (950 copies) volume with 330 vivid photos, like a shot of Arctic seabirds soaring over angular ice floes that looks like an abstract etching.

You needn't be a royal to buy the book, though some discretionary income would help: It costs $2,900. But this is really a charity play. All profits go to BirdLife International's Save the Albatross campaign. Which is how the royals got involved. It seems a flock of them are in the Rare Bird Club, an offshoot of Cambridge, England-based BirdLife, whose members each adopt an endangered bird species.

Authors Pat and Rosemarie Keough are veterans of coffee-table book publishing in Canada, having put together six previous brisk-selling volumes (like *The Ottawa Valley Portfolio*). According to Rosemarie, production costs are about $1,800 per book. That pays for the high-tech printing, hand-binding and a goatskin-and-linen-covered presentation box. After paying a commission to sellers, the charity gets an average $450 for each sale. The Keoughs get nothing.

Before sending in a buy order, reinforce your coffee table. Box and book together weigh as much as a pair of fur seal pups: 27.6 pounds. ■



It's okay to buy it for the pictures: Emperor penguins; a glacier in Victoria Land; abandoned British base on Deception Island.

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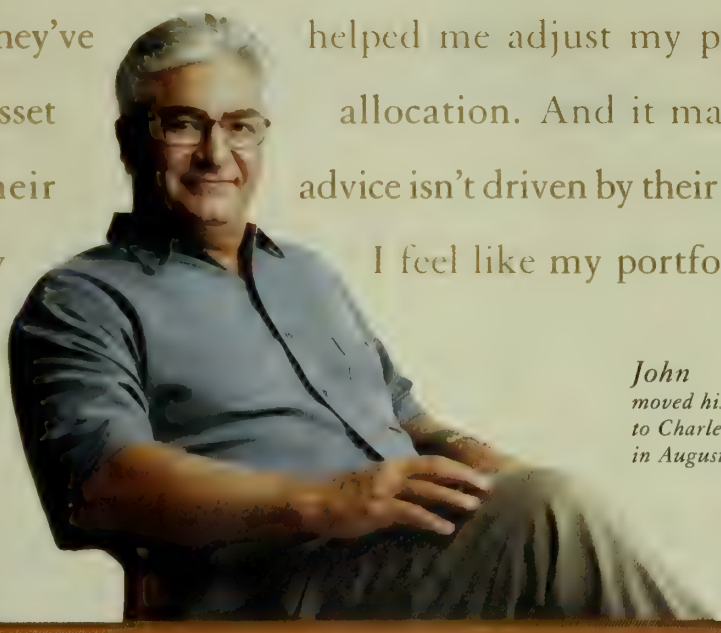

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# The Informer

informer@forbes.c

Let's talk: Charles Schwab (left) and David Pottruck

## Bucking for a Solo Gig?

David Pottruck, the unabashed co-chief executive of giant discount brokerage Charles Schwab & Co., was asked during a recent presentation at the National Press Club in Washington how he would reform corporate boards to protect investors. "The one thing I would probably vote for is the requirement that the chairman of the board and the CEO not be the same person," said the man who shares chief executive duties with Chairman Charles Schwab. Even Pottruck's own company? "All corporations," his flack later confirmed. —*Janet Novack*

## But It's Not Too Hard to Figure Out Why

Research in Motion Ltd., the publicly traded firm in Waterloo, Ont. that makes the hot BlackBerry handheld e-mail device, cites on its Web site a newspaper report that one user is Microsoft Chairman Bill Gates. However, Toronto's *Financial Post* recently quoted Gates, number one on The Forbes 400 list, as saying he has never used the gizmo. A Research in Motion flack won't say why *that* story isn't referenced. —*William P. Barrett*

## Buy Big, Cheap Art

A new academic study of art as an investme says that "contrary to the view of the art trad high-priced contemporary artworks classified masterpieces underperform lower-priced co temporary artworks by a significant 5% a ye No such gap exists among impressionist pai ings. Orley Ashenfelter of Princeton Univers and Kathryn Graddy of England's Oxford U versity also conclude that when estimating t price an artwork will bring, auction house e perts consistently underestimate the demand f big paintings. The paper was published by t National Bureau of Economic Research. —*J.*

## Your New Adviser: Columbo

Given all the wrongdoing being found in co porate America these days, a deal sporting synergies like th was probably inevitable: High-end detective agency Kroll h acquired Zolfo Cooper, the corporate restructuring advis whose boss, Stephen Cooper, is running bankrupt, scand damaged Enron. Zolfo Cooper is also keeping busy handli turnarounds at Laidlaw, Metromedia Fiber Network a Malden Mills. The transaction, which closed in September, v valued at $153 million. —*Katarzyna More*

## Our Question: Why Isn't He in Jail?

A used car salesman set up a nonprofit ostensibly to acc donated vehicles, sell them and give the proceeds to chari According to a very colorful internal memo the Internal R enue Service just released with names omitted, he (1) gave donors valuations way beyond fair market value; (2) kept c for family-member use; (3) took a leased car from the nonpro (4) gave relatives jobs selling and towing the cars; and (5) wr checks to himself from the nonprofit "when he needed mone labeling them "loan payable." The memo-writer recommenc substantial monetary penalties for the nervy salesman. —*J.*

## Not Exactly Members of the United Nations

There's no shortage of dubious jurisdictions peddling governmental trappings without legitimacy. They are generally no more th a Web site and maybe a bank account. Below, a sampling of "micronations," as they fancy themselves. —*W.P.*

| NAME | ALLEGED TERRITORY | CREATED | FOUNDER OR LEADER | NOTEWORTH |
|---|---|---|---|---|
| Great United Kiseean Kingdom | in Finland & Romania | 1992 | King John-Lucas I | offers free citizensh |
| Kingdom of EnenKio | off Marshall Islands | 1994 | Robert Moore | sold deep-discount "gold bond |
| Kingdom of Kerguelon | southern Indian Ocean | 1995 | King Zachariah | sells citizenships, bank charters from Arizona addre |
| Kingdom of Landreth | none claimed | 1950s | King Theron Paul | contact address is in Grand Rapids, Mic |
| Dominion of Melchizedek | moves around | 1990 | David Korem | Korem served U.S. jail sentences for frau |
| Principality of New Utopia | Caribbean | 1998 | Howard Turney | U.S. authorities won antifraud court order against Turn |
| Wessex Principality | none claimed | unknown | Prince Brian | fees for passports sent to P.O. box in Roseland, N |

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Forbes
NOVEMBER 25, 2002

# Paper Trail

**Two Iranian immigrants assembled the nation's fourth-largest tissuemaker by buying distressed mills. But when their company collapsed, creditors couldn't find most of the assets. What kind of shell game is this?**

BY NATHAN VARDI

THERE ARE PLENTY OF REASONS WHY MEHDI Gabayzadeh and Nourollah Elghanayan, the former chiefs of Hauppauge, N.Y.-based American Tissue, made enemies from Main Street to Wall Street. Loggers in northern New Hampshire developed a keen antipathy for Gabayzadeh after he told them last year that he would pay them whenever he wanted for their lumber because they needed him more than he needed them. The residents of tiny Berlin, N.H., started plastering bumper stickers on their cars that declared "Mehdi go home," after American Tissue stopped payroll payments to workers and idled the town's pulp mill in September 2001.

A millworker, however, has no wrath like a banker scorned. A year ago lenders to American Tissue seized the now-bankrupt company and are currently funding a $100 million lawsuit on behalf of the papermaker against Gabayzadeh and Elghanayan, alleging fraud. According to the civil complaint, the duo inflated American Tissue's assets so they could borrow large sums money to finance other paper companies they controlled se rately, draining cash from American Tissue—and leaving cre tors with little hope of collecting much of the $422 million o they were owed.

The allegations have gotten the attention of law enforcem officials. The Federal Bureau of Investigation is investigat Gabayzadeh and Elghanayan, and the U.S. Attorney's Office the Eastern District of New York is presenting evidence rela to companies they controlled to a grand jury. Gabayzadeh i helping: He pleaded the Fifth 540 times in American Tiss bankruptcy proceedings last April, making it even harder creditors to track down their money. "We simply don't kn where the money went," says Andrew Rosenberg, lawyer American Tissue's bondholders.

The creditors don't know much about the life historie Gabayzadeh, 58, and Elghanayan, 86, beyond the fact that t

mmigrants from Iran and that Elghanayan has been a suc-
ful developer of commercial real estate. (His three sons run
hattan-based Rockrose Development, whose properties
ide Carnegie Hall Towers and the Cast Iron Building; there
evidence the sons have been involved with American Tis-
The pair set up American Tissue, a producer of paper
lucts, in 1981, with Elghanayan furnishing much of the ini-
capital and Gabayzadeh responsible for running the daily
ations. The families of the two men split ownership 50-50.
Using mainly bank loans, they bought distressed mills on the
p, a strategy that dramatically escalated in the late 1990s.
company's biggest acquisition came in 1999, when it
ght the pulp mill in Berlin and a paper mill in nearby
ham, N.H. for $45 million in cash and assumed debt from
vn Vantage, which later filed for Chapter 11. By 2000 Amer-
Tissue's empire stretched from Oregon to New York and
ded eight mills capable of producing 919,000 tons of pulp and paper annually, 8 product-producing plants and 12 distribution centers. Securities & Exchange Commission filings show the company earned $24 million on $494 million in sales for the fiscal year ended Sept. 30, 2000. With 6% of the North American tissue market, the company trailed only Georgia-Pacific, Kimberly-Clark and Procter & Gamble.

The owners apparently were not content with being the fourth-largest tissue company in the U.S. Gabayzadeh built a Byzantine holding structure around the operation. American Tissue held its assets through 26 subsidiaries that had 40 different bank accounts. The company itself was owned by an entity called Middle American Tissue, which had no other assets and which, in turn, was owned by Super American Tissue, a holding company controlled by the Gabayzadeh and Elghanayan families (*see graphic, p. 72*). The financing needed to run this sprawling network was significant. By 2000 American Tissue secured a $145 million credit line with a syndicate led by ABN Amro-

owned LaSalle Bank and placed $165 million of bonds yielding 12.5% and rated B by Standard & Poor's, increasing interest expenses 83% to $31 million that year.

But in order to raise those funds, American Tissue had to bolster its balance sheet. The bond deal, led by Donaldson, Lufkin & Jenrette, required Middle American Tissue to kick in $20 million to American Tissue, which it raised by placing bonds and warrants (with "a nominal exercise price") with DLJ Merchant Banking Partners, the private equity arm of the investment banker. To further solidify the balance sheet American Tissue offloaded liabilities, too, transferring $24 million in debt owed largely to Elghanayan and his family to Super American Tissue.

**Money had a habit of sloshing around companies —and away from creditors—the suit alleges.**

At the same time Gabayzadeh set up a labyrinth of 45 companies with 100 bank accounts described as affiliates of American Tissue, but held apart from it by the Gabayzadeh and Elghanayan families. As a result, the affiliated companies were not liable for American Tissue's debt—even though, creditors claim, the affiliates benefited by receiving financing from American Tissue. These affiliates owned paper mills, machinery and two divisions of American Pad & Paper, a bankrupt Dallas-based stationery supplier, bought for $67 million in cash and assumed debt in 2000. The fact that there were so many separate affiliates also meant that a single entity could declare bankruptcy without dragging all the affiliate companies down with it.

Money had a habit of sloshing around all these companies—and away from creditors, the suit alleges. American Tissue's SEC filings show that by Sept. 30, 2000 the affiliated companies, together with the Gabayzadeh and Elghanayan families, owed American Tissue $23.9 million in non-interest-bearing loans carrying no maturity. American Tissue claims in court documents that the loans remain outstanding.

Court documents also allege that at least $15 million was siphoned from American Tissue to Super American Tissue, its ultimate parent, when customers made cash advances to Super American Tissue for inventory shipped to them by American Tissue. In a separate lawsuit funded by creditors, American Tissue accuses Elghanayan of constructing a transaction that saw the company buy machinery for $3.3 million, then turn around and sell it to Elghanayan for $1 two months later.

Inevitably American Tissue's balance sheet became stretched, making interest payments difficult. With only $4 million left on its bank credit line, American Tissue needed an infusion of $5 million from its parent to make a January 2001 interest payment of $10.3 million to bondholders. In order to keep paying bondholders and creditors, Gabayzadeh moved to refinance the whole operation in the summer of 2001. His plan was to combine the assets of American Tissue and the affiliated companies to create a larger (and supposedly more viable) company, called American Paper, and to use that entity to borrow $400 million by selling bonds with coupons as high as 12.75%, a another $200 million in bank credit. He almost pulled it Standard & Poor's gave the new bonds a B+ rating in July 20 and UBS Warburg prepared to manage the deal.

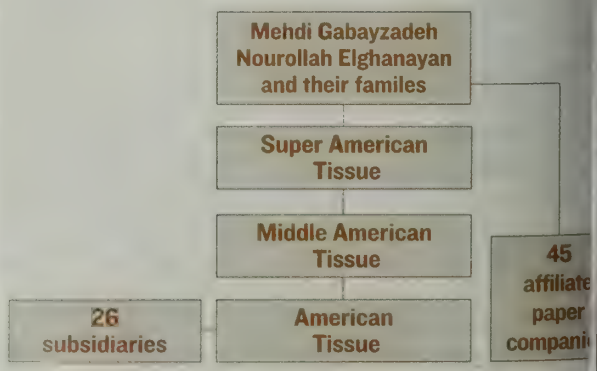
But at the last moment the deal was shelved. S&P blame on market conditions. Perhaps someone figured out that numbers at American Tissue did not add up. Indeed, months later in September, the company announced that financial statements for the first three quarters of 2001, togetl with fiscal years 2000 and 1999, contained material inaccu cies. Edward Stein, the company's chief financial offic resigned, and American Tissue, which had by then defaul on its loans, filed for bar ruptcy protection.

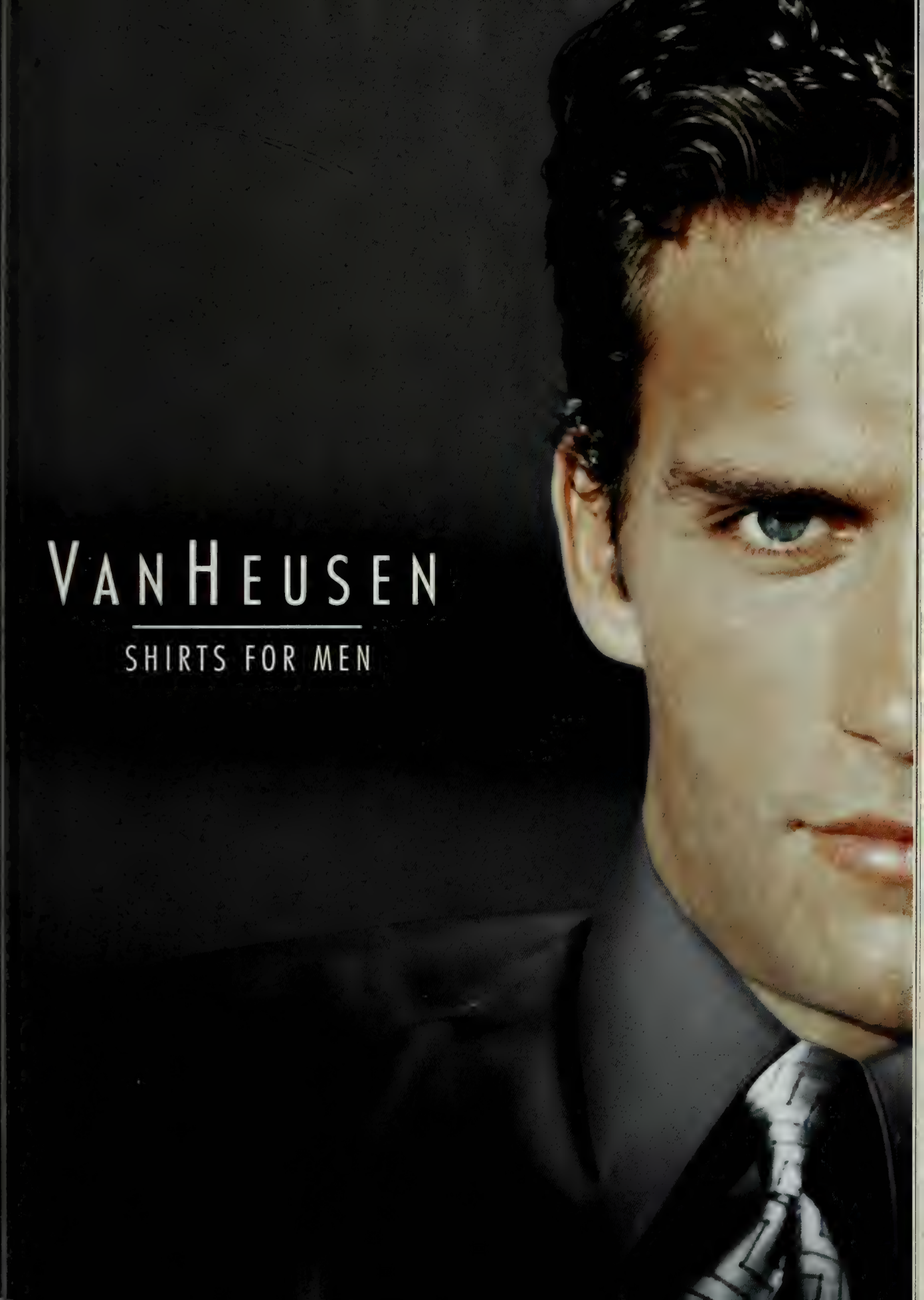
American Tissu lenders lost their patie with Gabayzadeh at October 2001 meeting where he refused to work with them selling assets to pay back an unspecified portion of the de They thought they had negotiated the resignation of b Gabayzadeh and Elghanayan, but after the two refused to quietly the banks filed for a court order to wrest the compa from their control. With the help of Kugman Associate Chicago restructuring firm, lenders tried to revive Ameri Tissue, but ran into all sorts of obstacles.

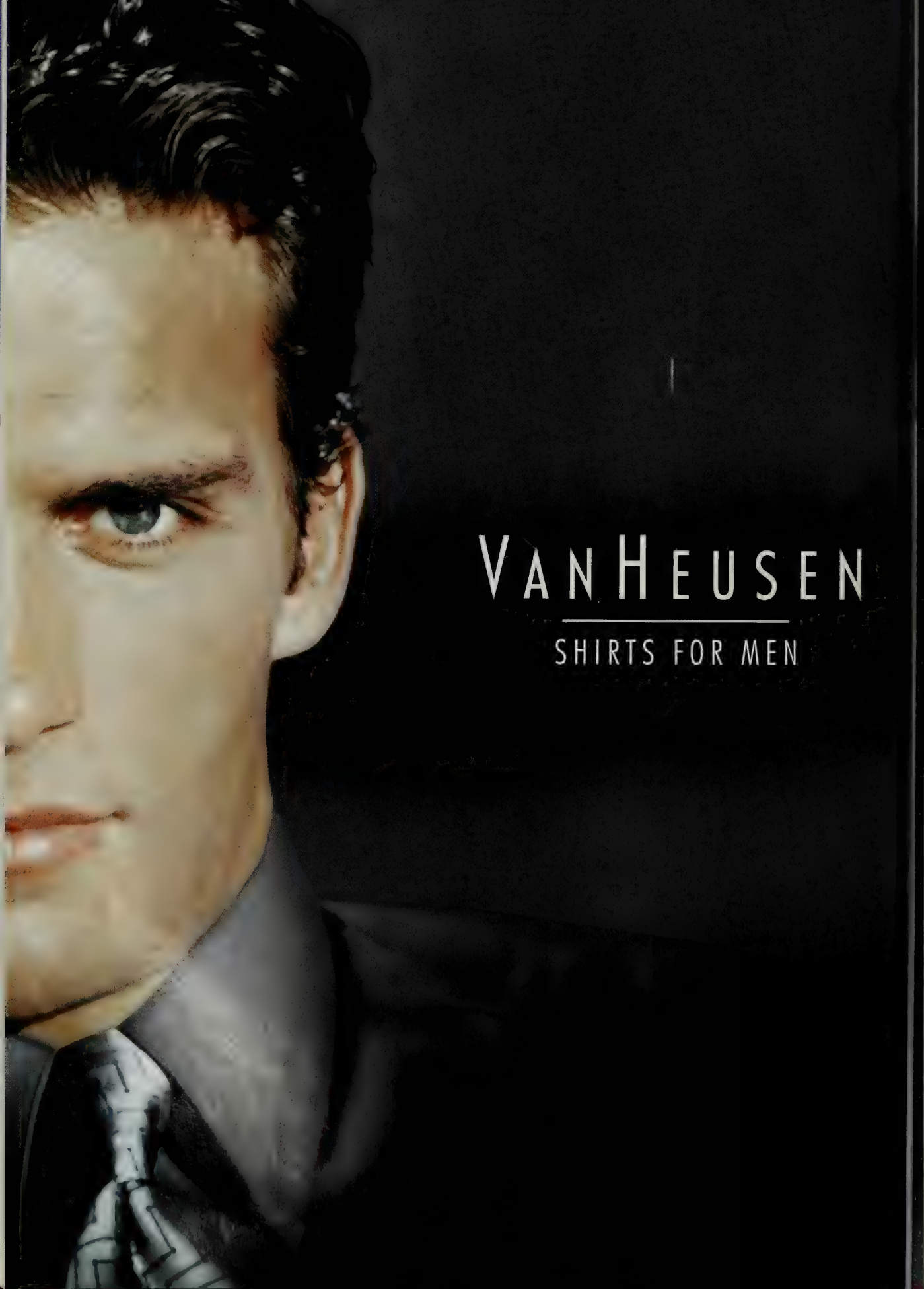
Kugman says it found at least $10 million in accounts rece able based on fraudulent invoices for goods customers ne received. It uncovered customer payments diverted to Su American Tissue, as well as inventory that should have b written down and damaged equipment that couldn't operat break-even volume levels. "The more we investigated, the m fraud we uncovered," says Dale Marcus, a Kugman senior p ner. "It would have been too much economically for

## A House of Cards?

**Federal officials and creditors are still trying to piece togetl the Gabayzadeh and Elghanayan empire, which consisted 74 companies. American Tissue and its 26 subsidiaries rai $305 million from banks and bondholders. Lenders claim money disappeared into affiliates, leaving them little once American Tissue filed for Chapter II. Many affiliates are als in bankruptcy courts.**




VANHEUSEN
SHIRTS FOR MEN


VAN HEUSEN
SHIRTS FOR MEN

**American Tissue's acquisitions, financed with debt, ended in bankruptcy and lawsuits.**

**July 1999** American Tissue sells $165 million in bonds, secures $100 million credit facility, and buys mills for $45 million.

**Jan.–Nov. 2000** The company draws $142 million on new credit facility. Affiliates buy assets in Tennessee, Maine, Vermont and Texas.

**Jan.–July 2001** American Tissue gets $5 million from its parent to make an interest payment. Affiliates acquire three more mills.

**Aug.–Dec. 2001** Bid to combine American Tissue with affiliates and raise $600 million in debt fails. The company says financial statements are bogus; files for Chapter 11. Gabayzadeh and Elghanayan are forced out.

**Aug.–Sept. 2002** Backed by creditors who seize the company, American Tissue sues Gabayzadeh, Elghanayan and Arthur Andersen.

*Sources: Court documents; SEC filings; Standard & Poor's.*

cured creditors to finance the reorganization."

Creditors decided to sell the assets of American Tissue, listed n its last quarterly filing as being $569 million, to recover as uch as they could. But, after selling almost all the mills and ventory, they have not recovered much—an estimated $61 illion. Unsecured creditors, owed at least $73 million, are out the cold. Bondholders, including Credit Suisse First Boston d Foothill Capital, a unit of Wells Fargo & Co., owed $165 illion, have been paid 10 cents on the dollar. The LaSalle Bank ndicate, owed $140 million, has been relatively lucky, getting cents on the dollar.

Creditors are placing some of the blame on Arthur Ander-n, American Tissue's auditor. They are funding an $800 mil-n lawsuit by American Tissue against the crippled accounting m, charging professional malpractice. In essence, they allege, rthur Andersen put its stamp of approval on inflated asset numbers and ignored insider self-dealing. The suit claims the company's collateral, such as inventory, was overstated by $39 million, and that accounts receivable were overblown by millions more. Separately, the U.S. Justice Department is investigating Andersen for its alleged role in shredding American Tissue documents.

Says Patrick Dorton, an Arthur Andersen spokesman: "This is the most egregious example of the blame-the-auditor tactic that we have seen this year." He says his firm shouldn't be held responsible for decisions made by Gabayzadeh and Elghanayan.

What are they now up to? Losing control of those mills they held separate from American Tissue under the banner of American Paper—and leaving even more creditors in the lurch. Their American Paper Mills of Vermont was forced into bankruptcy court in July by employees owed back wages. A court auction of the company's assets is not expected to recoup more than $5 million; its liabilities are $17.6 million. One of their mills in Memphis, Tenn., with liabilities of at least $28 million, was sold for $24 million through foreclosure and a bankruptcy court in August over Gabayzadeh's objections. Their mill in Augusta, Me. has been idle since the summer and owes $350,000 in overdue property taxes. They have also lost management control of the divisions they bought from American Pad & Paper, and are on the verge of losing their grip on three mills in Georgia, Tennessee and Wisconsin. In October the FBI raided the Hauppauge, N.Y. offices of American Paper.

Benjamin Brafman, Gabayzadeh's lawyer, insists his client has done nothing wrong. "He is a successful man involved in a variety of complicated business ventures," says Brafman. "I was never active into business," Elghanayan said in a deposition during American Tissue's bankruptcy last July. "I was a partner—50-50 with Mehdi's family, my family 50-50—but I was not responsible."

There was one loan that Gabayzadeh and Elghanayan made a point of repaying. In July 2001 Super American Tissue made its last installment, $11.6 million, to retire bonds, held by DLJ Merchant, that had warrants which could have been converted into a 12% stake of Middle American Tissue, the direct parent of American Tissue. So apparently eager were Gabayzadeh and Elghanayan to retain control of Middle American that they were willing to give DLJ Merchant a 60% return ($32 million for the $20 million it had invested less than two years earlier).

Coincidentally, perhaps, the same month the final payment on the bonds was made, Super American Tissue took out an $11 million loan, guaranteed by Gabayzadeh and Elghanayan, from Atlantic Bank of New York. After Super American defaulted on the loan in August 2001 by missing a principal payment, Atlantic Bank sued Gabayzadeh and Elghanayan, and won a $12 million judgment last April.

The catchphrase "maximizing shareholder value" is heard everywhere these days. This pair of businessmen seems to have pursued a variation you might call "minimizing creditor value." You can get away with it in this country—up to a point. F

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# Ameri-Dreaming

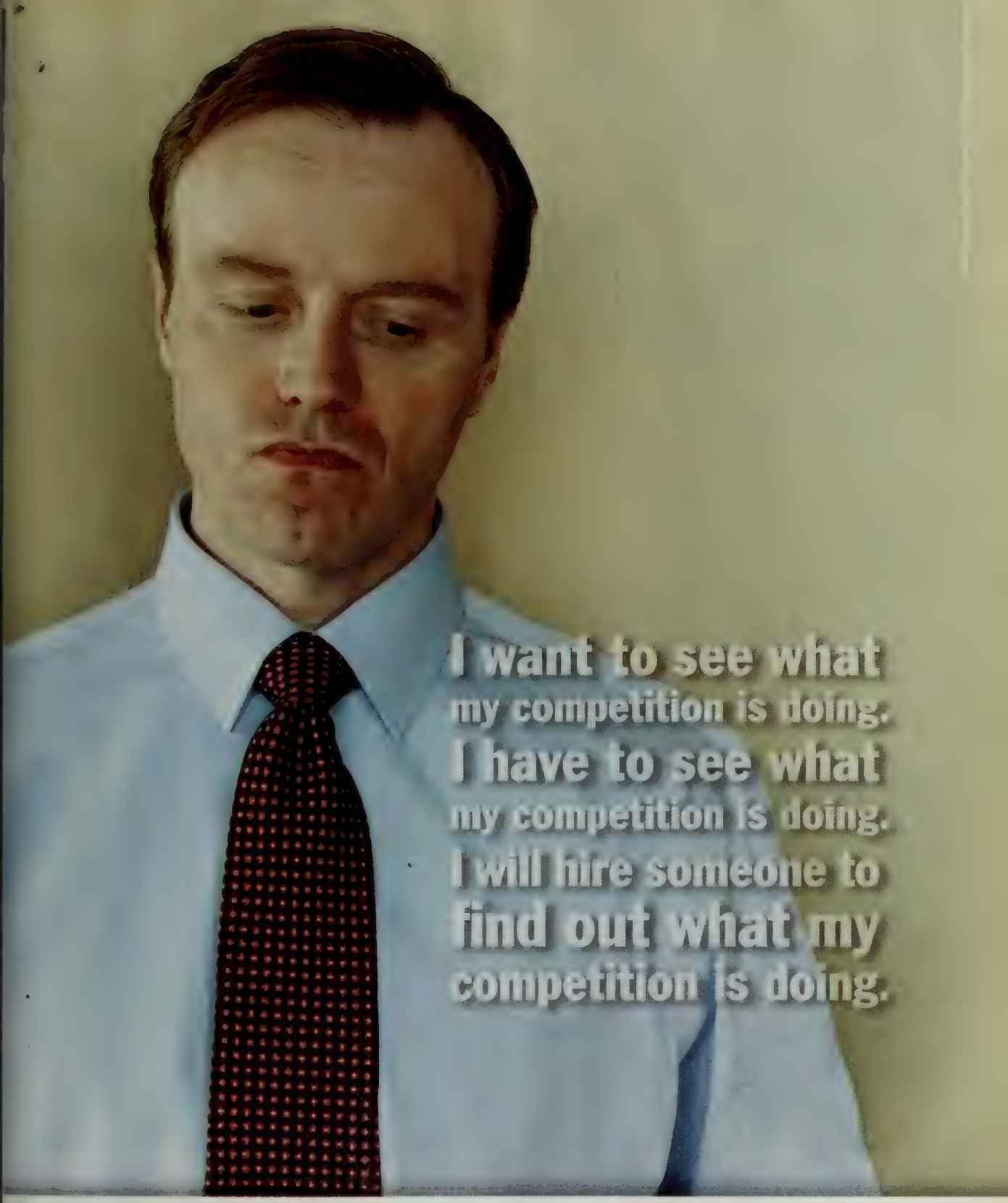
Hollywood and risky investments have always gone hand in hand, but here's one company that gives new meaning to the connection.

BY SETH LUBOVE

Lien on me: AmeriDream boss Lang Elliott is promising riches from tax liens.

YOU'LL FIND THE HEADQUARTERS OF AMERIDREAM Entertainment in the dusty desert town of Bermuda Dunes, Calif., east of Palm Springs. Nearby is an engineering firm whose pipe inventory lies haphazardly around the parking lot. Freight trains rumble across the street. A roadrunner perches on the hood of a truck.

Inside, the company's ambitions far exceed its humble s roundings. AmeriDream, which went public in June, has pl to not only produce a series of movies featuring Carol Burne old sidekick, Tim Conway, but also create television shows a

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build a $200 million, 12-acre studio complex in the desert. The grandiose project is supposed to include underground sound stages, a five-star hotel, a theme park, golf course, trade school and its own magnetic monorail system. Oh, and the little firm—which has yet to report any sales and is valued at just $26.5 million—also has plans to rescue Social Security and health care and, while they're at it, pay for your kid's college tuition.

"We're now at the stage of being a minimajor," brags the company's bearded chief executive officer, Lang Elliott, 53, a producer and director who claims to have been the "founder" of TriStar Pictures before selling it to the troika of Columbia Pictures, HBO and CBS. That may come as news to Victor Kaufman, vice chairman of Barry Diller's USA Interactive and TriStar's first chief executive and "founding chairman."

Hollywood is full of dreamers and schemers. Some of them even succeed. But, for sheer audacity, few can match Elliott and the cast of characters he's assembled at AmeriDream. It turns out that the company's other business is peddling tax lien certificates, a speculative investment with a reputation for rapidly separating the gullible from their money. To help run the company, Elliott has recruited such notables as Reb Brown as chief operating officer—a B-list actor whose star turns include a forgettable role as Captain America in a TV movie. Tim Conway, who will be making movies for AmeriDream featuring his stub-legged "Dorf" character, is a "consultant."

Just as in Hollywood, not everything meets the eye when it comes to this company. AmeriDream's little office in Bermuda Dunes has been, or still is, the address for 14 other public and private companies, going by such names as Specialized Leasing, Herbalist and Cyber Vitamin. Behind the scenes is a small group of stock promoters and one very prolific Santa Barbara attorney, Kenneth Eade, who have put together companies that typically float in the nether regions of the over-the-counter Bulletin Board system. In 1998 one of the promoters, Russell (Skip) Nordstrom, of something called National Investors Council, was slapped by the Securities & Exchange Commission with a cease-and-desist order for failing to disclose that he was receiving payments from companies to issue glowing research reports. Nordstrom consented to the order without admitting or denyi guilt. He was recently the head of invest relations of AmeriDream.

Elliott came into this bunch wh Eade—whose Russian wife dabbles Hollywood and will be acting, if you c call it that, in Conway's latest Dorf flick brought him into an outfit call McSmoothies, which was supposed develop a chain of stores selling fru shakes. But without whipping up a sin smoothie, the shell company morph into AmeriDream by June. "We said th is clean, it doesn't have a skeleton in t closet," says Elliott. But Elliott didn dream up AmeriDream overnight. T company is a reincarnation of a compa he created in 1996, Sierra Entertainme

Like AmeriDream, Sierra was going be a movie studio that would build "$150 million ultramodern technolog cal" studio complex in Las Vegas, "n unlike Universal Studios in Hollywoo blares its old Web site. The compa never built anything beyond the Web s and a press release, but the architectu drawings didn't go to waste. When Elli announced his latest studio project, simply lifted Sierra's renderings of a te like complex ("It takes you back to t Barnum & Bai Circus," he smil and pasted the into the plans for t new desert studio.

Also like Ame Dream, Sierra h another busin that Elliott was ev more excited abo tax liens. Elli claims he "stu bled" on the idea investing in tax li in 1996 after atte ing seminars or nized by Ned Bar Majors, a Myr Beach, S.C. law and promoter of lien-buying conce Smitten with idea, Elliott brou Majors aboard a director of Sier

AmeriDream COO Reb Brown in prior role.

As in Hollywood, not everything meets the eye with this company.

Company player: Tim Conway as "Dorf."

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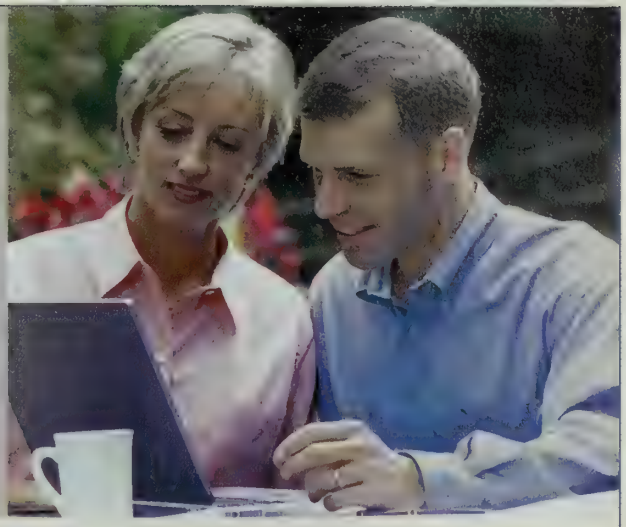

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After Sierra was folded into AmeriDream, Elliott recruited Majors to help run the tax lien business.

What exactly are these things? When a homeowner falls behind on his property taxes, the municipal tax collector puts a lien on the property. Many towns and counties, looking for quick cash, auction off these liens in the form of certificates that entitle the holder to future payments of the delinquent taxes, plus penalties and interest, which can run up to 18% annually. If the property owner never pays, the owner of the tax lien has the senior claim on the property, even ahead of the first mortgage holder. If the lien holder undertakes some legal expense, he can take over the property and evict the former owner.

What the promoters don't say is that the tax lien market is illiquid, unregulated and infested with scams. In July the feds packed off one Ernest Frank Cossey, the former chief executive of TLC America, to serve a 57-month jail sentence for overseeing a Ponzi scheme that raised $146 million from 1,850 mostly elderly investors, ostensibly for the purchase of tax liens. Instead the San Diego U.S. Attorney's office says, the money was squandered on Thoroughbreds, racing dogs and the refurbishment of the football stadium at Cossey's son's high school.

"One of the largest investment frauds in the history of this district," the U.S. Attorney said, which is quite an accomplishment, considering the region's nickname (Scam Diego). SBM Certificate Co., one of the few public companies that invests in this stuff, posted interest income of just 6% last year on $2.6 million of tax lien certificates.

But Elliott doesn't mention any of these risks in his sales banter. Instead he breezily claims that tax liens allow an investor to, say, acquire a $100,000 property for just $1,000, or 1% of the assessed value, if the property reverts to the tax lien holder. Put $50 million into tax liens, he says, and you can expect a return of $1.1 billion, or "$742 million on the low side."

He goes on: "With $2,000 invested over 18 years in tax liens, your child could go to any college he wants to, buy a condo and get a Porsche."

Elliott takes a 15% cut of the principal amount invested, which would be a minimum of $3,600. That covers his cost of acquiring the tax liens and inspecting the underlying properties. If the property goes into foreclosure, Elliott demands 50% of the proceeds when the property is sold. "Any way you look at it, it's tremendously profitable," he beams.

For him it is. Potential investors in Elliott's tax liens may want to talk with William Ford, a retired state worker living in Ontario, Calif. Ford figures he lost as much as $9,000 investing in one of Ned Majors' prior companies, Tax Lien Acqui sitions of Roswell, Ga. Majors' promo tional material at the time promised "89 to 40% Government Guaranteed Intere with almost No Down Side Risk of Prin cipal," and "the perfect tax loophole solu tion." But the company tumbled int receivership in 1999, leaving Ford's an more than 1,000 other investors' tax lie investments in dis array. Meanwhil Majors is tangle up in a lawsu with his forme partner in the firn

"Someho they spent $2,00 of my money o a lien, and whe I eventually g some documen from the county, showed an assesse value of $250 seethes Ford. " was probably di sitting next to th edge of a cliff." Th receiver has so f returned $2 millio to investors, b much of the unde lying real esta Majors bought h turned out to be " little value."

Elliott says he'll avoid such problen by training a nationwide staff of on-si inspectors to check out the propert before buying the liens. But that's ju housekeeping. The real challenge, he co tends, is helping investors manage all t money they'll be piling up.

In fact, he's so convinced that t liens are the path to riches that he clain he's lobbied the Bush Administratic and Congress to consider allowi investors to plow their Social Securi funds into tax liens. "Say you put $20,000 over the life span of work," says. "In just ten years that $20,000 w multiply into such huge profits y won't even need insurance."

"Caveat emptor," sighs invest Ford.

▶ **By the Numbers**

## Dream On

AmeriDream has plenty of plans to spend money, but not much money of its own in the bank.

**$5 million** Budget for AmeriDream's first movie, *Dorf USMC*, starring Tim Conway in his familiar role as a stub-legged doofus.

**$200 million** Planned cost of AmeriDream's studio complex on 12 acres in the California desert, including hotels, shops and restaurants.

**$2 million** Total assets of AmeriDream, including existing film library.

*Sources: AmeriDream Entertainment; financial filings.*

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# Pressing for Change

**RON DALY** has overcome some mean obstacles in life. Now he's got a handful at R.R. Donnelley.

BY STEPHANE FITCH

SOME DAYS RONALD DALY MEASURES out his life in pills. "I need muscle relaxants," he tells his doctor over his cell phone. It's his back—still a torment after two surgeries on herniated disks in his spine. Other executives at R.R. Donnelley are used to seeing him avoid the cushy chairs in meeting rooms at the Chicago headquarters. Still, it's not a great way to start his road trip to Donnelley's modernized 500,000-square-foot, 14-printing-press plant in Dwight, Ill. "I used to ask: 'Why me?'" he recalls with a weary smile. Daly

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has learned to live with the pain.

So, too, has Donnelley. Daly, 55, is president of its core printing business, and the business is hurting badly. As a middle manager rising through Donnelley's ranks in the 1980s and 1990s, Daly earned a reputation as a fiery leader who likes to shake up the status quo. Now he is the linchpin in Chief Executive William Davis' plan to remake the 138-year-old company. A lot of pain still lies ahead.

A consistent grower in the 1970s and 1980s, Donnelley fell asleep at the presses through the technology-driven efficiency boom of the 1990s, and now it is in its worst slide ever. Under Davis, revenues have fallen from $5.8 billion in 2000 to an estimated $4.8 billion this year and could head lower in 2003. Profits, perhaps no more than $1.35 a share this year, are off 40% from the $2.20-a-share high of 1999. At $20, Donnelley's shares are down $10 from a decade ago, even as the market has better than doubled.

It's not hard to see why. Magazine advertising pages were off 15% last year and are headed 9% lower this year. The collapse of securities offerings from Wall Street has cut the financial documents business by 40%. Overall, print shipments in the U.S. have fallen 11% after nine straight years of 3% average annual growth. That long boom financed the purchase of too many new presses; about 30% of capacity in the $166 billion industry is unused.

Still, Donnelley's problems are largely self-inflicted, says Davis. An outsider who arrived in 1997 after modernizing production at Emerson Electric Co. and reviving its Skil Power Tool division, the 59-year-old Davis came to Donnelley expecting to shed distracting businesses. Among the first to go were Metromail, a direct-mail-database company, and Donnelley Enterprise Solutions, which ran copy departments and mail rooms for law firms and the like. But those were minor fixes at a company that got 92% of its sales from printing; as Davis settled into his job and studied the printing business, he saw real problems.

To outsiders, Donnelley's 15% operating margin seemed sound. Visitors to Donnelley's plants saw lots of high-speed, full-color Heidelberg and Cerutti presses, folding machines and bindery gear, paid for with capital expenditures averaging $400 million a year—10% of revenues and well above the $300 million average annual depreciation. But Davis noticed what wasn't there: serious cost-control and process-control systems. "I came here in 1997 and saw 1982 all over again."

No company-wide computer system monitoring processes or inventory. No software to tell Donnelley what kinds of returns it was making on its printing jobs or how to price new contracts. Most of the 29 printing plants operated as personal fiefdoms; if, say, the book-printing plant in Harrisonburg, Va., was overbooked, there was almost no way it could hand off work to Crawfordsville, Ind.

Then Davis found Ron Daly, at the time president of Donnelley's directory-printing business. Engaging and garrulous, the 33-year veteran of the company had proven to be a perfectionist with raging ambition. Measured by profitability and revenue growth, Daly's plants were Donnelley's best. He was leading a controversial drive to standardize production and marketing practices.

Daly had been raised in a six-room apartment on the destitute West Side of racially divided Chicago. When he graduated from high school in 1964, he took a job as a proofreader at Donnelley because he "had a choice of that or the Air Force." He figured that a black man moving up through the ranks could notch a bigger mark for civil rights than by protesting in the streets. While his friends and neighbors on the West Side rioted the night Martin Luther King was assassinated in April 196 Daly worked late, then drove his brand new silver Chevy Nova home along back streets to avoid trouble.

Donnelley wasn't terribly hospitable: a city kid with a high school diploma. Da endured some ribbing from white co workers who joked that he looked like a c thief in that Nova. ("Some of those gu work for me now," he says.) And whe after five or six years at Donnelley, I wanted to step up to the managerial trac Daly recalls that "the human resources d partment here told me I didn't have th skills. ... I took it as a challenge."

He entered night school and earned bachelor's degree from Governors Sta University in 1977 and an M.B.A. fro Loyola University in 1980. He became ge eral manager of Donnelley's typesettin business in 1984, got his first job runnin printing plant in 1987 and his first po tion running an entire region for Donn ley in 1993. "Every time I got restless a swore I was going to leave," says Da "Donnelley would come back and give r what I needed to stick around." And 1995 he was named president of t telecommunications printing group, whi focuses on phone books and industr catalogs.

The boom in Yellow Pages ads was in the mid-1990s. Daly made the best of unsexy business. He hired scientists skill in tracking eye movements to prove th yellow-page readers flipping through rectories were drawn to full-color ads. had Donnelley artists put the findings i fancy brochure and offered all his directo customers (phone companies and so c free seminars on how to sell the expens ads to small businesses. He went overs

## He figured **a black man** moving up the ranks could **notch a bigger mark** for civil rights than by protesting.

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nd won long-term contracts from directory publishers in the U.K. and China, using proceeds to help finance new plants in both places. During Daly's six years at the helm, the division grew from $466 million to $834 million in sales.

He spent a lot of time rationalizing the business. Daly had coaxed plant managers to develop standard colors, paper weights and printing practices so that U.S. directory publishers wouldn't know the difference between a job done in Dwight, Ill. and one in Greeley, Colo. "We wanted everybody to use the industry standard yellow, then we found out there wasn't one," says Daly.

He had no tolerance for the old printing-is-an-art culture. Printers look at their presses "the same way an infantryman looks at his rifle," says Davis. "It's *their* rifle." As an outsider trying to promote change, Davis saw that Daly, a longtime insider, was the ideal person to get Donnelley's pressmen to loosen their grip on old machines and methods. "If certain people got in the way," says Daly, "we found a way to get rid of them."

Davis leaned on Daly in developing a restructuring plan announced in March 2001—an ambitious effort to trim production without decreasing capacity. Daly has since overseen the closure of five plants employing about 3,000 people. Also gone are investments in newfangled gear like superfast folding machines or presses that, in Davis' view, give "just incremental improvements" in profitability. Capital expenditures have been slashed 30% to $280 million. Much of that goes into systems that tabulate everything from the quality of the color on the pages flying off Donnelley's presses to the time spent getting a new print run going.

In Donnelley's directory plant in Dwight, for example, new computers alert operators feeding 14 presses when a roll of paper is about to run out—a process they botched until six months ago. Under the old system, if an operator misjudged a roll, causing a sheet break, it could take 15 minutes to get going again. Operators tended to err on the side of switching rolls too soon. waste.

The computers are watching the print output, too, for quality and quantity. If a customer gripes that its telephone book is

**An ambitious effort to remake Donnelley: Chief William Davis leaned on Ron Daly.**

light on ink, Daly can look at a report on the print run and, if he sees that the last 1% of the run wasn't dark enough, tell the client to open another box because the rest of the run was fine. By 2003 Daly and Davis expect to be getting print-quality and customer-satisfaction reports from across the company every day.

If Donnelley is a bit late to the automation age, this may be an opportunity for investors to play the new efficiencies. Says Christopher Curtis, Donnelley investor relations director: "Money managers say stuff like, 'You guys generate a ton of cash—what do you think you could do if you got your act together?'"

They're beginning to find out. Since 1997 the slowdown cut the operating margin in Donnelley's print business by a third. Yet in 2002, with the printing business weaker and Donnelley sales down from a year ago, the margin has improved to 10.1% in the first nine months, up from 9.8% the previous year. Goldman Sachs analyst Timothy Newington believes the changes put in place by Davis and Daly will save the company $160 million a year by early next year—a fact not yet reflected in the share price.

Cost-cutter that he is, Daly still bristles at the suggestion that there's nothing for him to do but wring efficiencies from a wasteful old organization. "I couldn't live in a world where all I do is try to squeeze nickels out here and there," he says. "I'm here to grow something."

Example: providing printing on demand via what you might call Frankenbooks—new volumes made up of different chapters from previously published works. (Donnelley works out the copyright difficulties in advance with publishers.) A professor who once required students to buy three texts can now order up a single book that includes excerpts from each. Under a new inventory-management system, Donnelley keeps digital files of books for publishers so they can easily reissue out-of-print titles. Daly is also offering new services like computer-aided proofreading and galley-checking to magazine publishers, which would likely pay dearly to offload such headaches.

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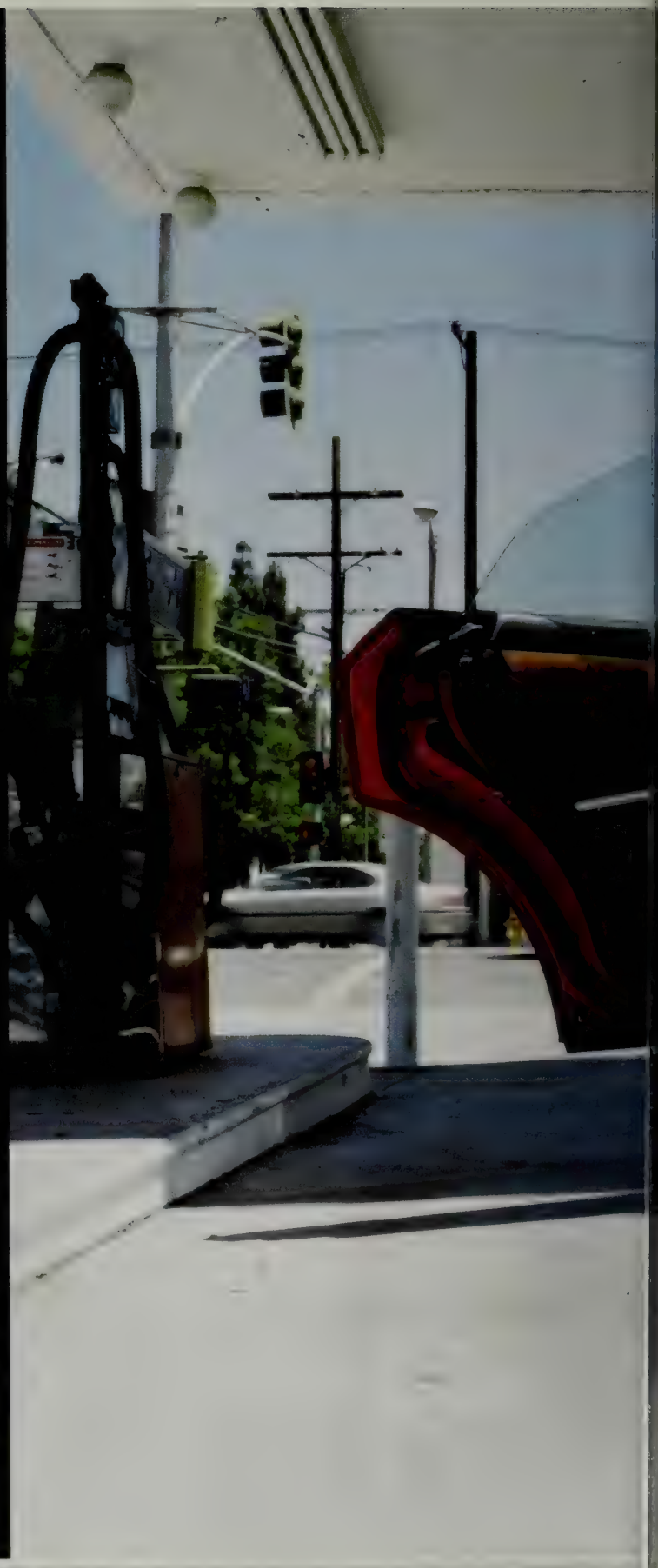

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# afty Fellow

Y JOANNE GORDON

I DON'T KNOW ANY OF YOU, BUT I KNOW you hate us." With those words, R. Michael Rouleau stood in front of two dozen angry arts-and-crafts suppliers to Michaels Stores at the hobby trade now in Chicago and challenged them to ir their complaints. They obliged. lichaels, they griped, didn't communicate ith them; rumors of bankruptcy and inestor short-selling had them worried bout getting paid. "It was a very tense ay," recalls Rouleau. "If we went down, e'd take many suppliers with us and robably kill the crafts industry."

That was in January 1997, several onths after Rouleau arrived as chief exutive officer of the broken 29-year-old ompany, by far the largest in the business. he year before, the Irving, Tex.-based ain had lost $31 million on $1.4 billion in les, and was running out of cash. No onder: It was impossible to track operaons, since its systems dated to the earliest ays of the personal computer; no one ould tell how long supplies had been on e shelf or what was moving. Michaels had ne thing going for it: the undeserved loyty of customers—typically suburban omen—who were obsessed with decoting their homes or finding yet one more roject for their already overscheduled kids.

Rouleau, now 64, went to work dragng the crafts-supply business—a $26 bilon-a-year industry, growing at 11% — to the late-20th century. First he raised 125 million in junk bonds, yielding 0.9%, to keep the company running. He eaned up stores, met with hundreds of endors, spruced up the custom framing usiness *(see box, p. 92)* and installed a $22 illion point-of-sale system to keep track who was buying what. He hired expericed retail executives from places like Target and A.C. Moore Arts & Crafts, replaced buyers, updated systems in four warehouses and built a fifth. In all, he's spent $116 million on new technology, much of it to get inventory under control.

All to impressive effect. Since 1997 revenues and profits have risen at an average 15% and 35%, compounded annually (the company earned $89 million on $2.5 billion last year); for the 26 weeks ended Aug. 3, sales were up 17%, net profits 252%. Same-store sales have increased in each of the past four years and in September—while the nation's comparable retail chain-store sales rose just 1.5%—they jumped 10%. Shares of Michaels, trading at a recent $45, have increased elevenfold since Rouleau took over in April 1996.

> Michaels Stores had no idea what its customers were buying or what it had in stock. Then **MICHAEL ROULEAU** showed up.

The key is inventory management. Drawing from 40 years of retailing experience at Target, ShopKo, Lechmere and Lowe's, Rouleau set about reorganizing Michaels' 200 different craft categories—from candle- and jewelrymaking to knitting and fabric painting—40,000 different SKUs in all. Today those categories are overhauled every one to three years at each of 753 stores during a 38-week, 120-step process. It's working. As of October only 759 items, less than 2% of all merchandise, were completely out of stock. Michaels is on track to shave 15% off its inventory costs ($900 million last year) by 2005 without having to send customers home disappointed.

You can see the system at work in the new 75-foot wedding section, with 1,000 different items, to be unveiled the week of Feb. 17. Last May buyers spent weeks evaluating past sales data. They decided which duds, several styles of wedding-cake tops among them, to discontinue. To find new products, they checked out competing hobby stores, visited bridal salons and read wedding magazines. They invited vendors to pitch their matrimonial wares. Eventually buyers identified 300 new products, including boxes of fake rose petals and custom-designed fabric flowers. How much to order was a bit of guesswork. In July new wedding vendors gathered in Irving for a how-to-do-business-with-Michaels class—a primer in forecasting sales, filling orders and shipping their merchandise.

By early September buyers and merchandisers met at a mock store setup to create the new wedding display. Using product samples and signs, they spent hours reconfiguring place cards, invitations, flowers and ribbon on shelves and pegs. The product mix must help meet per-store sales goals—$5 million by 2006. Finally, on Oct. 11, Michaels' chief of merchandising, Robert Spencer, signed off on the layout.

Back at the stores, managers are purging discontinued wedding items to make room for February's shipments. They'll mark down stuff until it sells, through successive monthly discounts, starting at 50% off in November and ending in late January on a 90%-off clearance table. By trying to avoid markdowns, Rouleau has managed to lift the operating margin from 4.7% in 1997 to a current 7.5%.

In warehouses around the country,

# Picture This

Custom frames are a big draw for Michaels Stores, accounting for about 9% of overall revenues—3 million orders just last year. One reason: Michaels undercharges and outdelivers the mom-and-pop outfits. (More upscale frames are sold through Aaron Brothers, its wholly owned 148-store chain.) Since Michael Rouleau took charge in 1996, custom-framing sales have grown 84% to $230 million.

Framing is labor-intensive. At Michaels it used to take about 75 minutes to sell, cut and assemble a frame. It couldn't outsource the work because no supplier was large enough to assemble and quickly deliver daily orders.

Rouleau solved this by creating Artistree, consolidating Michaels' five small frame-assembly factories into the wholly owned company that sells exclusively to the chains. Its three factories and distribution centers can assemble and ship about 4,500 frames a day. Rouleau also bought a frame-molding manufacturer, Carolina Art & Frame. Last year Artistree bought 25% of all its frame molding—6 million feet of popular styles like light oak—from Carolina.

Aaron Brothers is still assembling its own frames, but that will change next year, when Artistree starts putting them together. That means more profits for Artistree and more time for Aaron Brothers salespeople to sell more frames. —*J.G.*

workers coordinate shipping schedules with suppliers and trucking companies. Some products will be dropped off at distribution centers; others will ship directly to stores. The West Coast port work-stoppage has caused some delays, but since Michaels orders so far in advance, the February deadline is not at risk.

Come January each store will receive a copy of the new wedding display's layout and the exact positioning of each product. New sale posters will arrive in early February, along with all the wedding stuff. "It's amazing how sales pop once a new display goes up," says Jeffrey Wellen, head of strategic planning. Comp sales for a particular category often jump an average 30% after a new getup hits stores.

After February the trick is to keep enough stock without overordering. Every week the salesclerk army of 10,000 will pass a radio-frequency-scanning gun over each product. The device is tied to an ordering system that crunches historic and recent sales to calculate a suggested reorder amount, which is left to the discretion of each salesperson. Few have learned to get that balance just right. One other drawback: The average Michaels sales staffer still spends more time placing orders than waiting on customers.

Help will arrive next August with the start of Rouleau's most challenging project yet: automatic replenishment based on a perpetual inventory program that will t the guesswork out of reordering. Each ti an item is bought, the system subtract from the in-stock inventory; if that le gets too low to meet sales estimates, the s tem checks warehouses for the item. If out of stock, the vendor is contacted a the order electronically placed. So far 2, items are reordered this way. Bringing other 37,600 online is a mammoth t that requires Michaels' 1,000 vendors have compatible computer systems in than a year.

With Rouleau's overhaul, Micha seems poised for steady growth. The ch has finally figured out what people lik buy—and how to keep it on the shelves

**By the Numbers**

## Keep 'em in Stitches

Thanks to knitting, home-decor painting, scrapbook making and the like, the crafts-supply industry is growing item by item.

**$1,230** What the avid craft hobbyist spends each year on supplies.

**9.6%** Michaels' share of total annual sales of craft supplies in the U.S.

**51** The average number of projects intense hobbyists pursue each year.

**$18** The average one-time ticket sale at a Michaels store.

*Sources: Hobby Industry Association; Laura Richardson of Adams, Harkness & Hill; Michaels Stores.*

# CHARLOTTE USA

## THE RIGHT BALANCE ATTRACTS BIG BUSINESS

Few regions can boast the one-of-a-kind mix of accessibility, pro-business attitude and extraordinary quality of life that Charlotte USA can. But the 16-county region, which spans North and South Carolina, has achieved just such a balance — and then some.

by Lawrence Bivins

A shining symbol of Sunbelt opportunity, the Charlotte Region is now building on its preeminence as the nation's second-largest financial center and embracing next-generation industries such as aerospace, photonics, information technology and more. "We've always been a community that knows business," says David Cline, chairman of the Charlotte Regional Partnership, an organization of public and private leaders dedicated to the region's continued economic vitality. "From distribution and manufacturing to technology and finance, we understand what companies need in order to be successful."

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the nation's largest corporations and an operations center for hundreds more.

"There's a lot of energy here that rubs off," says Steve Huggins, senior vice president for strategic resources and information technology for Goodrich Corporation. The 130-year-old company, now a worldwide supplier of aerospace components, systems and services, relocated its headquarters to Charlotte from Ohio in 1999 as part of a broader transition to a new corporate direction. "Coming here allowed us to rejuvenate ourselves."

Striking such a delicate balance in a business environment was also what the Hearst Corporation sought when the media giant moved a large back-office contingent from Manhattan to Charlotte in 1990. "We were regrouping and reorienting our operations," explains Tom Hughes, the company's vice president and controller. Above all, the firm wanted a location where its workers could enjoy easier commuting times and a lower cost of living but not give up big-city amenities such as professional sporting events, fine dining and cultural attractions. "Charlotte has been a great city for us," says Hughes, whose workforce of 500 includes employees who moved New York and Ohio. "Our productivity way up."

### OPPORTUNITIES TAKING FLI

Nature granted Charlotte USA imm geographical advantages, all of whic luster to the region's appeal as a pla live and work. It sits within a day's dr Chicago, New Orleans, New York, St. and Miami. Three interstates and a w four-lane highways put area busines close touch with millions of North A can consumers, as do several rail con Global markets and suppliers are easy reach via nearby deepwater pc Charleston, S.C., Savannah, G.A. Wilmington, N.C. The Blue Ridge M tains are a short drive west, an number of beaches can be found w three-hour drive east. World-class g including Pinehurst and other renc resorts, is never far away. And the moderate, four-season climate mear most outdoor recreation can be er throughout the year. "I really like th round sunshine here," says He Hughes, a native New Yorker.

We have all made promises. Spoken. Unspoken.

We may have stood over our sleeping children and said silently,

"I will give you better than I was given.

I will make a clean path to take you forward.

I will help make this world a better place."

At Duke Energy, we share this promise with others around the world.

are 23,785 people with families, who love, live, raise children, and hope for the future.

And all of us have committed that we will be leaders –

creative thinkers, careful planners, and honest partners.

But, most of all, we have vowed to be true to our word and to ourselves –

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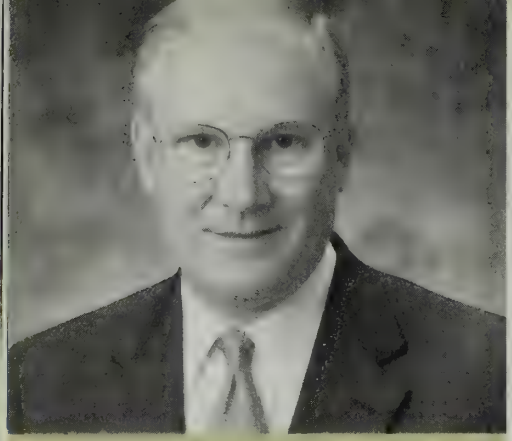

*Michael Almond*
*President and Chief Executive Officer*

## CHARLOTTE REGIONAL PARTNERSHIP

Michael Almond is a believer in balance.

"Balance is good for business," says Almond, president and chief executive officer of the Charlotte Regional Partnership. "Our region, known as Charlotte USA, is a great example. We have a unique balance of business strength, accessibility and quality of life that is very appealing."

The Charlotte Regional Partnership is a nonprofit, private/public organization dedicated to the planned growth and prosperity of Charlotte USA, a region comprised of 12 counties in North Carolina and four counties in South Carolina.

Using independent research, the staff of the Charlotte Regional Partnership collaborates with government and industry to market Charlotte USA and communicate its advantages to new, relocating or expanding businesses nationally and internationally.

"Our region is made up of many different communities — urban and rural, small and large — and many different industries," Almond says. "This diversity contributes greatly to the balance we enjoy in Charlotte USA."

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CHARLOTTE USA.

But for many companies in the region, Charlotte USA's accessibility begins and ends with its excellent air service. With nonstop flights to 104 cities, Charlotte/Douglas International Airport is now one of the Southeast's busiest airports. Destinations include Frankfurt, London and Toronto, in addition to San Francisco, Los Angeles, Seattle and other western cities. The facility averages 550 daily flights and 23 million passengers annually, according to Jerry Orr, the airport's director, making Charlotte/Douglas number one in the nation in terms of flights per capita. "We have a lot of room to grow," Orr says, noting that construction will begin soon on a third parallel runway.

High-quality air service was a top priority for Muzak, LLC, the provider of "audio architecture," when it sought a new home for its corporate headquarters. "In addition to good weather, we knew we had to have a good airport," says Bill Boyd, president and chief executive officer of the company, which moved from Seattle to Rock Hill, S.C., in 2000. "This is a national company, and we're on planes all the time."

Others cite not just the air service at Charlotte/Douglas, but its convenience. "Getting into and out of the airport is very easy," says Goodrich's Huggins, whose company maintains 140 facilities in 20 countries around the globe. "Air service was something we looked at pretty hard."

## THE BUSINESS OF EDUCATIONAL INNOVATION

Firms settling in the region are greeted by a solid lineup of educational assets. In recent years, ambitious efforts have been under way to ready local workers for the demands of the Knowledge Age, starting at the earliest years. In mid-2000, educators in Gastonia, N.C., unveiled the Highland School of Technology, a state-of-the-art magnet school offering instruction and mentoring across three academies: biomedical technology, communications information technology, and manufactu and engineering technology. "We beli that in order for the region to compe the high-tech economy, we needed a tech school," says Don Warren, a re textile industry executive who helped the idea to fruition.

With technical, curricular and other port from IBM, BellSouth and Time-W — each of whom have an extensive ence in the region — local educators d oped a model that is now being replic in neighboring counties. "The criteri admissions are extremely select Warren says, "but there's also a long ing list for faculty who want to teach th

Across the region, excellent K-12 cation has caught the attention of am businesspeople. "The school system passed our expectations," says Mu Boyd, who relocated 90 employees their families from Seattle. "Many c kids were actually behind when enrolled in the schools here."

Charlotte USA is equally well serv its 10 community colleges. To max education and training resources, re al leaders have created the Cha Regional Workforce Development nership, which is leveraging curr expertise, federal grant funds and reach efforts to meet workforce c tives. "Our mission is to be the na leader in regional workforce dev ment," says Tony Zeiss, president o tral Piedmont Community College.

The group is organizing a regio consortium that is collaborating i design of a common two-year tec gy curriculum. It has ironed out ar tion agreements with area universit that students may seamlessly co their studies at the baccalaureate l they choose. "It's a great model," Zeiss, who anticipates replicatin approach for other fields that are i

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CHARLOTTE USA.

**Life. In Balance.**

*Ken Thompson*
*President and Chief Executive Officer*

## WACHOVIA

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As the fourth-largest bank holding company in the U.S. based on assets, Wachovia has the depth of resources, the expertise, the geographic reach and the leading-edge products and services to help customers manage their assets, facilitate transactions, grow their companies and build their communities.

Wachovia provides customers the best solutions to meet their needs — whether it's a traditional loan or a sophisticated corporate financing option, a simple international payment or complex trade outsourcing solutions.

With corporate headquarters and nearly 19,000 employees in Charlotte, we know firsthand that Charlotte is a great place to live and work. Just as Charlotte offers us excellent business resources and quality of life, we give back to the community through charitable giving and the time and talents of our employees who volunteer for community service. Come and visit us in Charlotte. We think you'll like what you see.

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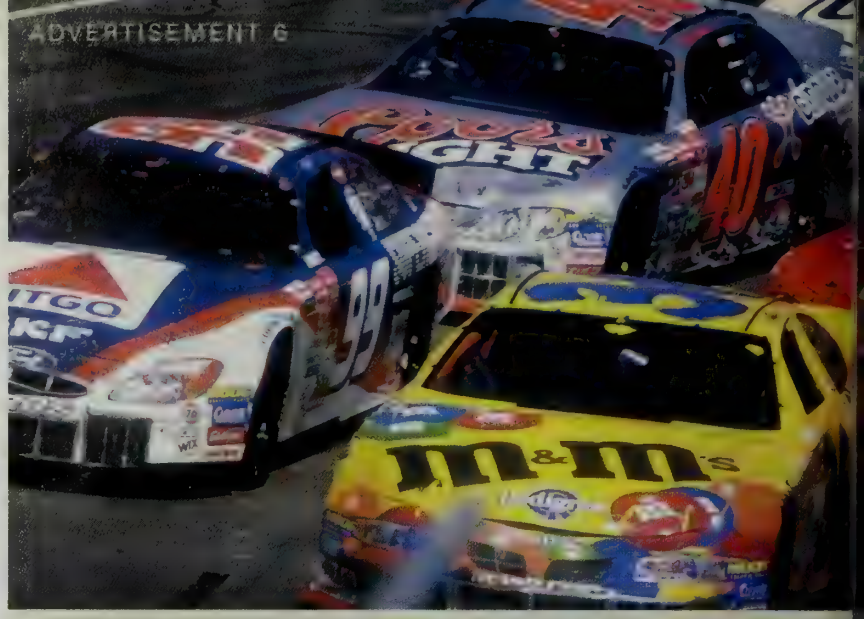


## LOWE'S MOTOR SPEEDWAY IS BOON TO THE REGION MULTIBILLION-DOLLAR TOURISM ECONOM

demand across the region.

Few destinations can match the depth and breadth of educational support offered by Charlotte USA's universities. "We look constantly at what this community needs," says Jim Woodward, chancellor of the University of North Carolina at Charlotte (UNCC). "That drives our planning from a strategic perspective." In practical terms, it has meant top-quality degree offerings in business, engineering, health services, urban studies and more. "We've added 40 programs in the last eight years," Woodward says, including doctorates in engineering, information technology and educational leadership.

The university is also an ambitious facilitator of research and technology transfer. Its emergence as a force in applied research is evidenced by the development in early 2002 of the Charlotte Institute for Technology Innovation, a 100-acre research campus being funded with the help of an unprecedented $10 million donation from Duke Energy.

"The Charlotte Institute may be the most exciting thing I've seen happen here," says Mac Everett, senior executive vice president for corporate and community affa Wachovia Bank. Everett, a resident of lotte for the past 25 years, calls UNCC of the region's best-kept secrets.

Also recently created at UNCC i eBusiness Technology Institute, a par ship between local universities, Ba America, Wachovia and Dell Compute institute, which draws heavily from UN College of Information Technology, pro IT professionals with access to facilitie expertise to help them develop new e ness solutions across numerous indus "I frankly think the institute will driv growth of this region over the co decades," says Everett.

Much of UNCC's support for reg industry is embodied at 3,200-acre versity Research Park, which em more than 22,000 workers. Wit addition in 2001 of TIAA-CREF's Sou Service Center, University Research is now approaching capacity. "UNC been one of our partners," explains Ann Werner, president of shared ser for the company, which provides i ance and investment services to e tional professionals. "It's been a

WHAT CAN A

# CANOE

TEACH US ABOUT

# PARTNERSHIP?

*It's best if you go with someone who's done it before*

*You cover more distance when you work in tandem*

*Whether you get soaked depends on proper balance*

*Wisdom is everywhere. Uncommon wisdom is knowing how to apply it. As one of the nation's leading corporate and investment banks, we place a unique premium on long-term relationships. Talk to us. We'll take all that you know and all that we've learned and, together, achieve an uncommon partnership.*

WACHOVIA SECURITIES

*Uncommon Wisdom*

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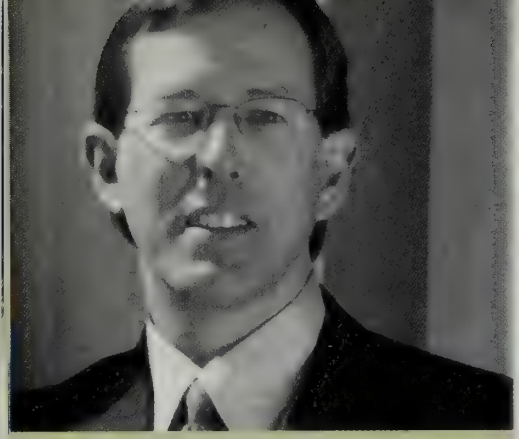

*Paul E. Rutledge, III*
*President*

## TRANSAMERICA REINSURANCE

From its main marketing office in Uptown Charlotte, Transamerica Reinsurance helps financial institutions manage the risks associated with life insurance and annuity business.

Transamerica Reinsurance, a division of Transamerica Occidental Life Insurance Company, is one of the top five life reinsurers in the United States and ranks among the top 10 globally, based on inforce volume or policy face amounts. It offers a wide range of risk, capital management and business enabling solutions that help companies improve the performance of their life insurance and annuity business. Clients include more than 500 financial institutions in North America, Asia-Pacific and Latin America.

Leadership in this highly specialized financial business demands exceptional levels of knowledge and experience. Transamerica Reinsurance employs more than 300 highly trained professionals, including actuaries, underwriters, financial experts, MBAs and CPAs.

One of the best-known brands in the life insurance industry, the company's logo symbolizes the Transamerica "Pyramid" building in San Francisco — one of the most recognized landmarks in America and a prominent feature of the San Francisco skyline.

TRANSAMERICA
REINSURANCE

# THE NORTH CAROLINA DAN THEATRE PROVIDES AREA RESIDENTS W WORLD-CLASS ENTERTAINME

close relationship."

In providing exemplary higher education to the region, UNCC is joined by other superb institutions such as Queens University and its McColl School of Business; Johnson C. Smith University, which traces its roots to 1867; and Davidson College, which now ranks among the nation's most selective liberal arts campuses. There is also Winthrop University, whose highly regarded programs in music and computer science helped bring Muzak to the region. "We had no problem convincing them that we could be a resource," recalls Anthony DeGiorgio, Winthrop's president, who regularly meets with corporate site selection teams considering the region.

## BALANCING BUSINESS WITH LIFE

Along with cutting-edge academic programs and workforce support, institutions such as Winthrop and UNCC play a critical role in maintaining what many consider to be the region's premier selling point: its unparalleled livability. "The quality of life here is pretty extraordinary," says Goodrich Corporation's Huggins. "That makes it easy to attract good employees."

Cultural stimulation is ubiqui "This is a very arts-oriented commu Winthrop's DeGiorgio explains. For Hill, that tradition extends back t 1940s and 1950s when the can stately Byrnes Auditorium began ho performances by the likes of Vla Horowitz and Yehudi Menuhin. legacy helped transform the arts munity in and around Charlotte int most generously funded in the na surpassing even New York City in t of financial support.

"Whether they're newcomers or li residents, people here love this explains Harriet Sanford, president Charlotte Arts and Science Council, raises and allocates funding for 57 li performing arts, scientific and he organizations. That affinity translate generosity both in terms of financia tributions, leadership and voluntar vice. "It's very unusual for people t us money and then just walk away, ford says. More likely, residents g their time and expertise as well, s their participation as a way of con

he community. "I've always felt our par-
pation is as important as the money we
e," agrees Huggins. "There's a genuine
it here that encourages people to help
ke the community better. I've never
erienced anything like it, and I've lived
lot of places."

t first, Hearst's Tom Hughes was sur-
ed to be asked to serve on the Board of
ectors of Charlotte's Discovery Place, a
pular science museum, and other
ups. "I was never involved in anything
New York," he says. "No one ever really
ed me to be. But here, I'm involved in
ny things." And the community's wel-
ning character was a large part of
arst's success in moving existing per-
nel to the region. "Our relocation pack-
featured a provision that after one year,
one who wanted to return to New York
uld be able to do so," Hughes recalls.
t of 270 Hearst staffers who came to
arlotte, only three requested the com-
y move them back home.

harlotte's cultural energy yields an artis-
ambition that also is noticeable in local
gramming. On display at the McColl
nter for Visual Art, for example, are
dern wood carvings depicting Zambian
rriage ceremonies. Exhibits at the
ine Museum of the New South are
fraid to tackle unpleasant moments in
t-Civil War Southern history. This fall's
certs by the Charlotte Symphony, while
uding mainstream fare by Haydn and
zart, also featured beefier orchestral
ks by Mahler and Britten.

One thing you see in Charlotte is a bal-
ed development of arts, science and
ory," Sanford says. "Many communities
e only one. That we concentrate on all
e makes us unique."

nd there is plenty in the region for
se whose tastes lie elsewhere. In
lition to NCAA athletics, professional
key, WNBA basketball and AAA base-
ball, the NFL's Carolina Panthers have brought big-time spectator sports to the region. "I don't think the Panthers get enough credit for bringing Charlotte together," Wachovia's Everett says. The team's 73,000-seat stadium, in particular, has brought renewed vigor to the city's central business district. In Concord, N.C., sprawling Lowe's Motor Speedway, home of NASCAR's Winston Cup, Coca-Cola 600 and other regular events, is a boon both to the region's quality of life and its multibillion-dollar tourism economy.

In addition to sponsorship of the

*Graham W. Denton,*
*Charlotte Market President*

## BANK OF AMERICA

Headquartered in Charlotte, Bank of America is one of the world's leading financial services companies. Through innovative technologies and the ingenuity of its people, Bank of America provides individuals, small businesses and commercial, corporate and institutional clients across the United States and around the world with new and better ways to manage their financial lives.

The company enables customers to do their banking and investing whenever, wherever and however they choose through the nation's largest financial services network. This includes approximately 4,400 domestic offices and 13,000 ATMs, as well as 30 international offices serving clients in more than 150 countries, and an Internet Web site that provides online banking access to 4 million active users, more than any other bank.

Bank of America stock (ticker: BAC) is listed on the New York, Pacific and London stock exchanges. More information about the company can be found on the company's Web site, www.bankofamerica.com.

Bank of America

speedway and its own NASCAR racing team, Lowe's Companies is a visible supporter of the community. The home-improvement chain, now the nation's 14th-largest retailer, gives generously to a range of programs, especially those designed to preserve the region's natural resources. "They've been very supportive of efforts to protect the environment," explains Charlotte Regional Partnership Chairman Cline. "In a region that is growing as rapidly as ours, that is a key component of economic development."

## BUSINESS SPOKEN HERE

Amid all this, the Charlotte Region is also without rival when it comes to the infrastructure that companies need to succeed in today's rapid-fire economy. That readiness to do business has always manifested itself in abundant supplies of industrial-quality power, natural gas and water. More recently, it also has taken the form of digital wireless and fiber-optic Internet backbone. "We have better access to high-speed data connectivity than any other city this size," says Cline.

"One of the reasons we picked Charlotte was because of its telecommunications infrastructure," says TIAA-CREF's Werner. Much of her company's Charlotte-based operations involve data processing and call center operations, making dependable and affordable broadband access critical. Lowe's Companies is now constructing a 157-acre customer-support campus near Mooresville for similar reasons.

Lowe's, which maintains a unique, decentralized operational structure, is wiring its new facility in a way that provides maximum convenience for its mobile management team. The firm anticipates the conducive physical surroundings, near Lake Norman, will facilitate employee recruitment and retention, much the same as it has for TIAA-CREF and many others. "We've really been pleased," reports Werner. "All the things we were hopin find in Charlotte, we have found."

Always moving forward, Charlotte eyes the dawn of a new era in its sto business history. While considerate c rich past, it is clearly a community n interested in its future. "Charlotte alv seems to be looking forward," Goodr Huggins says. "It is always changing growing, which supports our compa efforts to change and grow."

Cline believes the region's success corporate destination ultimately boils d to a single feature. "We will bend backward to help a business do wh needs to get done," explains Cline, hin an entrepreneur in Union County. That ity for business dates from the region's liest times, he says. Throughout much history, Charlotte's potential was not understood outside the region. But t changing, thanks to the promotional e of the Charlotte Regional Partnership other regional groups. Says Cline, "Ou is to take this gem and showcase it t rest of the world."

## CHARLOTTE USA DIRECTOR

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E-mail: malmond@charlotteregion.co
Web: www.charlotteusa.com

*Lawrence Bivins, a Raleigh, N.C.-b freelance writer, is a regular contribu* North Carolina, *the monthly periodical state's largest business association. H writes regularly for* Carolina Busines Commercial Real Estate Today, *and h cles on aging and technology are se* Encore: The Wall Street Journal's Gui Life After 50.

# Stop the Whining

T'S BECOMING DOWNRIGHT FASHIONABLE TO PREDICT THE end of the boom in car sales. The talk picked up when vehicle sales in September showed a sharp drop from the pace in August. The drop will undoubtedly continue. I predict that sales of passenger vehicles in the last three months of this ear will trail last year's 4.4 million by 400,000. October's sales ecline from October 2001 was the biggest decline from a yeararlier figure for any month in years.

But this doesn't worry me. Of course car sales are going to ll below last year's explosive level. They were pumped up in ctober and in the entire fourth quarter to record-shattering vels, when 0% financing was ntroduced after Sept. 11. But slump is not starting. It still oks as if the industry will sell ose to 17 million vehicles is year, close to last year's 7.2 million and 17.4 million the year before that.

**Yes, car sales are going to fall below last year's explosive level. But a slump is not starting.**

It is common to turn onthly figures into annualed rates. The rate got as high 18.7 million earlier this ear, so anything lower is a gn of decline to the bears. Believe me, a figure like 18.7 million an aberration. The monthly figures are too easily affected by eather, dealer sales contests or inventory levels.

Here's my case for a strong 2003—meaning sales of, say, 5.5 million vehicles. As I write this, inventories are in good ape, two months' worth of vehicles, which is good for this me of year, and Detroit is keeping the sales pressure on with % deals on the new 2003 models. The economy hasn't colpsed, and personal income is still high.

The great baby boom generation is in its peak earning eriod. The younger generations are starting to buy cars.

The cars and trucks are enormously attractive, with new esigns, new technology and the greatest variety of vehicles ailable in auto history.

The prices are relatively low, and the rebates and interest te reductions make them bargains.

People are still switching from cars to sport utility vehicles, r adding sport utility vehicles to their fleets. Anyone who oesn't own an SUV seems to want one. This year 25% of all ew vehicle sales are SUVs, and that figure is climbing. And new UV models are coming on the market every week.

What about all the signs of trouble? Sure, there are plenty. The ump in the stock market, the sluggish economy, a possible war Iraq and the decline in excitement over 0% financing.

Yes, you can list all these things and say they should bring on a downturn. The trouble is we've been listing all the negatives for four years and predicting slumps in auto sales for the past four years. But we were all wrong.

The cloud in this picture is that the foreign makers are taking a great share of the business and pumping out a flood of exciting cars and trucks. This means that General Motors, Ford and the U.S. side of DaimlerChrysler must keep incentives big to keep their factories running. Shorthand: They are fighting back with price.

But I see signs that GM in particular is beginning to compete on the product side, too. The industry giant is awakening from its long sleep, and the buyers like what they see. Proof is that the decades-long decline in GM's market share seems to be ending.

A couple of other things are breaking in favor of the Big Three. A few small makers are falling by the wayside. Daewoo of South Korea is out of the market and Isuzu seems to be winding down its American operation. In addition, Detroit has been holding its market share in trucks this year, despite the array of new Japanese and Korean models. Over time I still expect the foreign brands to take truck business away from GM, Ford and Chrysler. But then I expect Detroit to win back some of the car business as its designs improve. What's more, the growing vehicle market means Detroit can lose some market share and still hang on to its unit volume.

I believe there is enough evidence here to predict a continuation of good business in the auto world. Maybe the rocket will sputter, but I don't think so. Just don't be fooled by that big October sales decline. As Scarlett said, tomorrow is another day. F

## Not to Worry

This year's car and truck sales are likely to rank as the third best in history—not something to get concerned about.

| Sales (mil) | 2002 | 2001 | 2000 |
|---|---|---|---|
| First 9 months | 12.9 | 12.8 | 13.6 |
| Fourth quarter | 4.0E | 4.4 | 3.8 |
| Total | 16.9 | 17.2 | 17.4 |

E: Estimated. *Source: Automotive News.*

Forbes.com | Jerry Flint, a former Forbes Senior Editor, has covered the automobile industry since 1958. Visit his home page at www.forbes.com/flint.

# Race Against Time

**Ross McMullin came to Adidas to revive the brand. He didn't count on having to save his own life, too.**

BY DANIEL KRUGER

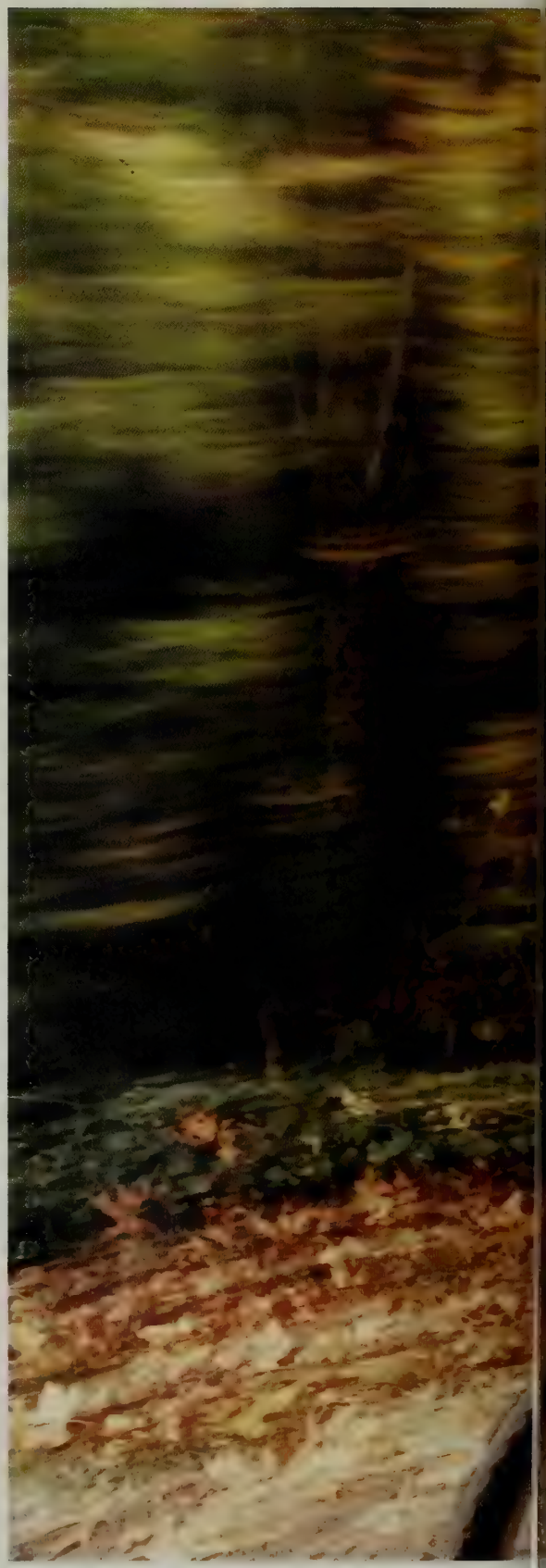
THE NAGGING PAIN IN ROSS MCMULLIN'S SIDE WAS A torn abdominal muscle—or so the first three doctors he saw told him. As for the blood in his stool? Hemorrhoids, of course. But his wife, Cheryl, wasn't so sure. His discomfort had lingered for five months. The pain started in February 2001—seven months after McMullin had quit as head of Gillette's $1.1 billion (sales) central European operations and moved to Portland, Ore. to take over as chief executive of Adidas' flat-footed North American operations. She pushed him to see another specialist, who recommended a colonoscopy. He was still groggy from the procedure when the gastroenterologist delivered the bad news. "He said, 'You have cancer. It's not a borderline case. I don't need to do any more tests,'" McMullin recalls. Biopsies confirmed what the doctor already knew: stage-four colorectal cancer that had spread to his liver. The five-year survival rate was a grim 5%.

This was impossible. McMullin, then 44, had always been fit, running a 3:30 marathon as an adult, playing junior league hockey as a kid in Toronto, giving up the sport at 19 only after suffering his sixth fracture, a shattered shoulder. Now he was racing mountain bikes and playing competitive tennis. "First there's this feeling of disbelief—'I've got to get another doctor to look at me,'" he remembers thinking.

His thoughts, naturally, turned to his family. Had he adequately provided for Cheryl—was his will up to date and his portfolio in order? What would it be like for his daughters, Julia, 11, and Kristina, 9, to grow up without him?

And, by the way, what about his new assignment? Nearly a year into a turnaround and he was already making discernible progress. Damn, he wondered, why now?

When McMullin had arrived, Adidas was in third place in the U.S., way behind leader Nike and trailing Reebok, even during its late 1990s slump. The division ended 2000 with a 4%



"He said, 'You have cance

ROBBIE McCLARAN FOR FORBES

borderline case. I don't need to do any more tests.' "

rise in revenue to $2 billion, but profits had slipped 35% to $69 million, by FORBES estimate. Morale was in tatters: Executives were griping that headquarters in Herzogenaurach, Germany didn't trust them enough—who were they to make decisions about U.S. operations, the most competitive arena in the world and ultimate driver of the brand?

There were problems closer to home, too. These same managers were pushing Adidas sales at department stores, all but ignoring hot chains like Foot Locker, Footaction and Finish Line. Sure, gross margins were better at Sears than at Foot Locker (an estimated 40% versus 36%), since sales at department stores weren't advertising-driven. But Adidas was missing out on the all-important sizzle of sneakers. Parents, not kids, shopped at Target—and a mom's selection of a brand is as good as a death sentence. The company also seemed to have little idea of what consumers wanted. Product development meant little more than giving designers of, say, basketball shoes a series of price points and leaving them to figure out what to make. And once the shoes were made, they were getting to the stores promptly only 25% of the time.

Taking a page from his Gillette past, McMullin pushed research. In one project Adidas marketers paid teens $200 to let them peek in their closets to see their choice of brands and follow them to the mall to see how they spent. Designers were given sales data to see what consumers were actually buying. Departments involved in every stage of production—from the drawing board to the packaging—had new responsibilities for getting shoes to the stores, and performance measures to ensure the departments were following through. And McMullin was mending fences with specialty chains. None of these improvements had shown up yet on Adidas' top line. First-half 2001 sales were down 4% to $947 million, still better than McMullin and Adidas Chairman Herbert Hainer had expected, given the economic slowdown and the strategic overhaul.

What a time to be facing his own mortality. McMullin had already scheduled a trip to visit Herzogenaurach in July to brief the board on his progress. The night before the presentation he told Hainer about his illness. Treatment would entail chemotherapy and radiation to shrink the tumor, then at least one operation to remove it. After that there would be postoperative chemotherapy and possibly more surgery. Hainer asked McMullin what he wanted to do—obviously mindful of how Horst Dassler, son of Adidas founder Adi Dassler, never told anyone outside of his family that he had esophageal cancer, before he succumbed to the disease in 1987 at age 51 (*see graphic*). McMullin told him that focusing on work would help him during the treatment process, and Hainer promised his support. "He has a passion for sport. He is emotional," says Hainer of McMullin. "But he is a real businessman."

The day he returned from his trip McMullin went to the hospital. He received his first dose of chemotherapy on Friday, Aug. 3—and was back at work the following Monday. That was to be his regimen for 13 months. After his five-hour-a-week intravenous treatments he spent weekends at home recovering from the effects of irinotecan and leucovorin. On arriving in the

EXIT STRATEGIES

## Coping With Cancer

**For a chief executive it's hard to conceal a major illness, though many have tried. Some use their remaining time to map out the company's future without them; others leave chaos in their wake.**

**Horst Dassler, Adidas**
Diagnosis: esophageal cancer
The son of founder kept the news of his illness secret, but arranged for a successor. Worked up to his final day in April 1987.

**James E. Olson, AT&T**
Diagnosis: colon cancer
Diagnosed too late for effective treatment. Shifted chairman duties to Robert Allen. Went public with news just a week or so before his death.

**Steven J. Ross, Time Warner**
Diagnosis: prostate cancer
Died three years after orchestrating the big merger in 1989. Spent his last months maneuvering Gerald Levin over his rival Nicholas J. Nicholas.

**Andrew Grove, Intel**
Diagnosis: prostate cancer
Stayed on the job, occasionally taking naps at a hotel. High-dose radiation treatments successful. Still active as chairman at the chipmaker.

**Roberto C. Goizueta, Coca-Cola**
Diagnosis: lung cancer
Died in 1997 from an infection contracted during chemo; the charismatic chief left a succession mess that continues to haunt the company.

**Herbert D. Kelleher, Southwest Airlines**
Diagnosis: prostate cancer
Openly made daily flights to Houston's M.D. Anderson Cancer Center, trimming business travel. Cancer gone. Kelleher still drinks and smokes.

**Edward Crutchfield, First Union**
Diagnosis: lymphoma
Illness, now in remission, led to an accelerated departure for the merger-happy chairman. Prepared the way for G. Kennedy Thompson.

**Rudolph W. Giuliani, New York Mayor**
Diagnosis: prostate cancer
After going public with his illness and a very messy divorce, decided not to run for Senate. Radiation gave him a new lease on life; 9/11 sanctified him.

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office Mondays, he put all thoughts of chemo out of his mind until Thursday night.

Treating the cancer that had spread to his liver called for a vanguard procedure called radio frequency ablation. As his doctor explained it, electrodes would be inserted into the liver tumor, which would be zapped via heat signals rising beyond 113 degrees Fahrenheit. The procedure was scheduled for Sept. 19.

On Sept. 11 McMullin phoned his two salesmen, who were making calls near the Trade Center, to satisfy himself that they were okay. (They were fine, along with the 25 or so employees who were on other flights when the planes hit.) "My fight seemed kind of small," he recalls. Still, he ordered his staff to assess the potential damage to the business—whether Adidas would lose orders or need to trim back production schedules if the economy started reeling. Though these questions were unresolved, McMullin's doctors refused to reschedule the ablation. Ordering new sales projections on his desk by the next Monday, he went into the hospital.

He still kept his condition under wraps. McMullin didn't want his people to lose momentum, fall into old bad habits or become distracted by his illness. To ensure anonymity throughout treatment and prevent leaks, his name never appeared on his chart or in his files. "This is a small community," he shrugs. At work it was hard to tell that he'd been fighting cancer. He lost very little hair, kept his eyebrows and even gained weight, perhaps because he had stopped exercising. The first, and for weeks the only, person at Adidas who knew about the illness was lawyer Paul Ehrlich. Because Adidas' offices were spread across seven locations, employees did not notice that the boss wasn't coming in on Fridays.

The ruse didn't become taxing until the start of radiation treatment. The daily 15-minute sessions, which McMullin scheduled for 7 a.m. so that he could make it to work around 7:30 as he always had, were part of the last phase of preoperative treatment. He also had to wear a chemotherapy pack (which he concealed under a baggy sweater) to pump in drugs at five-minute intervals. During the third week of radiation he started feeling something akin to "a sunburn" in the areas doctors were radiating—his bowels. All he could get down was bananas, rice, applesauce and toast.

McMullin was now having to excuse himself from meetings to run to the bathroom. "There were days when I didn't make it through the day," he admits. When the pain became too great to manage, McMullin pleaded with his doctors to stop nuking him. Not a chance, they said, the tumor had shrunk by nearly two-thirds.

Come October, with his insides still on fire, McMullin had to face the public. There were dinners at which to show Adidas' new lines to executives and buyers from Footaction, Foot Locker and its catalog subsidiary Eastbay. McMullin would tote around a glass of unsipped red wine and sit down to a plate of indigestible steak and carrots that stared up at him, before he would beg off at 9 p.m., hours before festivities ended.

But the meetings bore fruit. Footaction loved the suede $ high-top All Day All Night II sneakers Adidas made for its exc sive distribution. Foot Locker was happy with Adidas' $90 T-M shoes endorsed by basketball up-and-comer Tracy McGrady.

At the end of October McMullin's doctors cut him so slack, stopping his radiation three days early so he could atte a board meeting in Germany. Back in the U.S. in Novemb McMullin made a round of visits to the specialty chains, bri ing his senior managers along to lead Adidas' pitches. He wan his lieutenants to take a higher profile, because he was schedu for surgery Dec. 10 to remove his tumor. Before the Thanksg ing weekend McMullin sent a companywide e-mail informi the staff about his illness. "My doctors and I are very optimis of a full recovery," he told them.

McMullin had made good progress. Chemotherapy a radiation had reduced the colon cancer to a third of its origi size. The ablation had seemingly eliminated the liver tum Doctors cut McMullin's colon, performing a colostomy, a sur cal opening through the abdomen to create an exit path waste. After a week in the hospital McMullin returned home two more weeks of recovery. His first solid food after surg was Christmas turkey.

**Every day is a fight. No telling when a cancer like this will come back. And Reebo isn't clearing the field anytime soon.**

He made a poor stay-at-home patient. Ever on the pho McMullin badgered his chief financial officer, and others, keep costs down and stay on budget, making sure that orders by Foot Locker and Kohl's got shipped on time bef year-end. Though Adidas closed the year with a 4% drop sales to $1.9 billion and a 4% falloff to $66 million in estima profits, McMullin had reason to cheer. Basketball shoe sales, best barometer of a brand's pizzazz, rose 42%, and the or backlog was up 8%.

Back full time on Jan. 2, McMullin still wasn't out of woods. There was more chemotherapy before the colostomy reversed in April, and another bout after that operation. Me time, he was trying to sell Adidas through high-class departm stores, like Nordstrom.

As his treatments wound down in July, McMullin was too weak to maintain a full travel load. He had to skip Adic ABCD basketball camp in Hackensack, N.J., and missed out meeting with high school senior LeBron James, billed as second coming of Michael Jordan on the court and a sneaker spokesman.

Today Adidas' sales are growing; they were up 8% in first half to $1 billion. (Backlogs jumped 15% during t time.) Every day is still a tough fight for McMullin. Reeb isn't clearing the field anytime soon. And, in late Octob more bad news: A follow-up scan of his liver showed a rec rence of the tumor.

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# Domain Game

## Local pols think nothing of grabbing land from one private owner to give to another. Can they be stopped?

**BY IRA CARNAHAN**

ARNOLD HATTERS HAS SOLD fedoras and derbies from its store on Eighth Avenue near Times Square for 42 years. But it is about to be ousted so that a mightier New York institution can occupy a new 52-story headquarters to be built in its place. In the name of economic development the Empire State Development Corp., a state agency, has condemned 11 properties housing dozens of small businesses and is handing the land over to the New York Times Co. a private developer.

"When we first heard rumors deal might be coming, we said th no way the government is going to mit that to happen," recalls M Rubin, general manager of the hat s founded by his great-uncle in 1 "Well, we've learned. It can happen, there's really not a damn thing a s company like us can do."

The U.S. Constitution provides the government can use its power of nent domain to take private land "public use," so long as the owner

ir compensation. How would roads or ther public works ever get built if the overnment could be stymied by a single oldout landowner?

But since the U.S. Supreme Court ıled in 1984 that eminent domain could e used for any project "rationally related a conceivable public purpose," states ıd cities have stretched the definition of ıblic use beyond recognition. Now, in e name of curing blight or promoting onomic development, they routinely ndemn land owned by one private rty to sell (or give) it to another. ıe new owners have a way of being etter connected and wealthier than e evictees.

Big swaths of land and large numbers residents are at risk in the domain me. This summer San Jose, Calif.'s city uncil, as part of its "Strong Neighborods Initiative," approved the designation of areas housing an astonning third of the city's 900,000 sidents as subject to possible ndemnation for private use. ıst December the Riviera ach, Fla. city council apoved a plan that could lead to e condemnation of 1,700 uses and apartments, displacg 5,100 residents. The redeveloped a will feature luxury shops, a hotel, onference center and new yacht slips.

Scott Bullock, an attorney at the Instite for Justice, a Washington group that s helped landowners fight dozens of ch takings, concludes: "Our cities and tes have become like real estate specuors, securing land owned by their own izens on behalf of politically connected ivate interests."

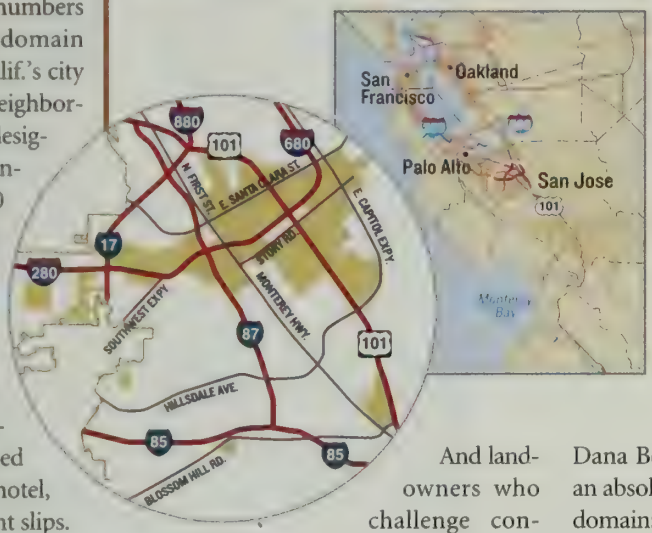
Case in point: Forest City Ratner, veloper of the new Times building, is aded by Bruce Ratner, a fundraiser for mer New York Mayor Rudolph Giuni. The firm is also the city's secondgest spender on local lobbyists, accord; to a 2000 study. Number one on that ? Blumenfeld Development Group, ich has been assembling land for an st Harlem shopping center with the aid a government condemnation threat.

It's not only in New York that ories are built on property wrested from private owners. Arlington, Tex. condemned private land so the Texas Rangers could build a new stadium there. That helped George W. Bush turn a $600,000 Rangers investment into $15 million.

There are a few signs, however, that public officials may have finally overplayed their condemnation hand. In Iowa the state legislature passed a law in 1999 that stops revenue-hungry municipalities from condemning farmland for private development.

## In the Way, in San Jose

The City Council has designated the shaded areas, housing a third of San Jose's 900,000 residents, as subject to possible condemnation.




And landowners who challenge condemnations in court have recently won a few battles. In April the Illinois Supreme Court blocked a landgrab by the Southwestern Illinois Development Authority, which offers condemnation services for a 6% to 10% commission. The agency had seized the property of a recycling plant just east of St. Louis to sell to a neighboring racetrack for an expanded parking lot. "The power of eminent domain is to be exercised with restraint, not abandon," the court lectured in its 5-to-2 decision.

Meanwhile federal judges from the Central District of California have stymied two separate condemnations designed to benefit discount retailer Costco. Last year a judge blocked the city of Lancaster, Calif. from condemning a 99 Cents Only Store and then selling the property to an adjoining Costco for $1. The city acted after Costco threatened to shut down its own store if the city didn't hand it the land—conveniently owned by its competitor—for expansion. City officials, fearful of losing the high-volume Costco, put aside any thoughts of fair play and complied. Now they are appealing the judge's decision.

In August a judge issued a preliminary injunction blocking Cypress, Calif. from condemning an 18-acre parcel owned by the Cottonwood Christian Center so that it could be sold to Costco. Cottonwood had patiently assembled the land through open market purchases, aiming to build a new home for its burgeoning membership. The city's stated "public purpose" for the land grab? It would get more tax revenue from a retailer than from a tax-exempt church. The judge wasn't much impressed by that rationale and also questioned the condemnation for its encroachment on religious freedom.

"Everybody's home would produce more taxes as a Costco or a high-rise office building," Institute for Justice attorney Dana Berliner tartly observes. She offers an absolutist antidote to abuse of eminent domain: Officials should not be allowed to use condemnation to take property from one private owner and hand it to another.

Sounds reasonable. But it's unlikely to happen. And it certainly won't happen in time to help Leonard J. Weiss, one of the small property owners who is being booted out to make way for the New York Times. The Times and its developer didn't even try to negotiate a voluntary deal but went straight to government officials and are getting the land at a discount, Weiss and other owners complain. The Times insists it is paying full freight for its 99-year lease on the land and that the land has long been scheduled for condemnation by the state anyway.

"I never believed that the government could take away property from somebody and just arbitrarily give it to somebody else," says Weiss. "That never made sense to me. And it still doesn't." F

# To Shred And Protect

Incriminating e-mails have become a litigator's favorite tool. New software promises to help companies protect themselves from nasty lawsuits—no matter what side of the law they are on.

**BY ERIKA BROWN**

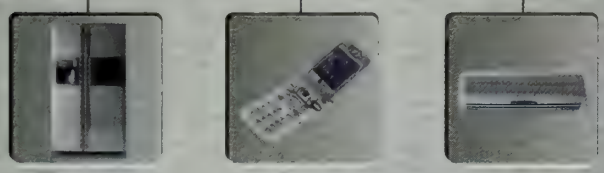
AN E-MAIL HELPED SEAL THE tragic fate of Arthur Andersen. Candid e-mails from equity analyst Henry Blodget were used by New York state attorney general Eliot Spitzer to push Merrill Lynch into a $100 million settlement for allegedly misleading investors. And Jack Grubman's heads-up e-mails to WorldCom executives play a role in regulators' probe of Salomon Smith Barney.

E-mail, the pesky productivity tool, suddenly is every company's minefield. Businesses generate 13 billion e-mails a day, according to IDC. In less time than it takes to think of what to say, e-mail is gone—and then it is all but impossible to shred. E-mails leave a trail on hard drives, servers and backup tapes, and you never kn who might have been "blind" copied.

David Furbush, a securities litigat and partner at Brobeck, Phleger & Har son in Palo Alto, Calif., says eve one of his cases includes at least o e-mail as evidence. "Each case boils do to a small number of sound bites. I evitably, some of them are e-mails wh

ecause life is too short
o waste time. Wouldn't it be nice if your
igerator could do your shopping on the Internet? Or if you could
rate your air-conditioner with a UMTS mobile phone?

**Digital home-network**



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somebody was annoyed, frustrated or tired and wrote something thoughtlessly," he says.

Companies are caught between the urge to destroy all embarrassing missives and the need, more than ever before, to preserve any sensitive digital scraps and confine them inside a firm's walled garden. The stakes are rising. The new Sarbanes-Oxley Act makes destroying or attempting to destroy documents related to a federal investigation a crime punishable by up to 20 years in jail. And, as Arthur Andersen learned only too well, the act of destroying evidence in anticipation of a lawsuit can lead a jury to the conclusion that the information would have been damning.

**"Customers joke that Eliot Spitzer doubles as our chief marketing officer."**

Now a handful of software outfits promise to help navigate the e-mail minefield and reduce the chances of a loose-lipped rogue employee bringing a company down. One software package equips executives with *Mission: Impossible* powers that make e-mails self-destruct in an hour, a day or in two weeks. Another dictates which workers can read, copy or print an e-mail—and which ones can't. Still others sniff e-mails for banned phrases to prevent risky notes from sneaking out. They can even search for words in context (the word "breast" is okay if it's near the word "chicken," but not otherwise). The key players in this sector are Authentica, IBM's Lotus, Omniva Policy Systems, Marshal Software and Tumbleweed Communications.

Omniva's Kumar Sreekanti keeps secret e-mail behind closed doors.

Smart companies start by finding out what lurks in their e-mail servers long before plaintiff lawyers ever show up. The Food & Drug Administration, John Hancock and Metropolitan Life all use software from Tumbleweed, based in Redwood City, Calif., to screen thousands of e-mails a day. Its software stands sentry between employees and their corporate firewall, sifting through e-mails and attachments for words that fall within the danger zone. Notes "infected" with banned words are quarantined, blocked or rerouted to the boss.

Tumbleweed can let banks prohibit e-mails between analysts and brokers or encrypt messages from the research department. "Customers joke that Eliot Spitzer doubles as our chief marketing officer," boasts Jeffrey C. Smith, Tumbleweed's chairman.

Air Liquide America, the U.S. unit of a French gas company, takes encryption much further with software from Omniva, based in San Francisco. Omniva wraps e-mails in 128-bit encryption, a supersecure level of code that has yet to be cracked. Omniva's servers store the unique software key needed to decrypt each e-mail. Every time a recipient tries to open one of those e-mails, his company's server contacts Omniva's servers to ask permission to unlock the code and read the e-mail. Senders can set a date to terminate the keys, rendering e-mails permanently garbled, the equivalent of shredding. Air Liquide decided to retain purchase orders for 6 years and contracts for 15. Everything else gets deleted after 90 days to avoid headaches and free up storage.

If a lawsuit gets filed or a federal investigation is launched, companies can hit Omniva's "red button." It blocks the deletion of all decryption keys, essentially

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ceasing all shredding. Anything shredded prior to that is gone forever. Omniva helps enforce a company's document retention policies by overriding individual requests to delete, and filing away e-mails as long as the company dictates. "We're not just deleting," insists Kumar Sreekanti, Omniva's chief executive. "Our goal is to keep the honest people honest."

With a few clicks, an executive also can prevent recipients from copying or printing a confidential note. Omniva can paste a transparent image over the e-mail's code. If someone tries to copy or print the message, a blank page comes out instead. "We help organizations comply with regulations automatically so they don't have to rely on people to do it," says Sreekanti.

Some fairly paranoid organizations, including the CIA, FBI and the U.S. House of Representatives, use software from Authentica, based in Waltham, Mass. Rebecca Burr, director of marketing analysis at Xilinx, a chipmaker in San Jose, Calif., is buying Authentica software. Authentica's MailRecall product would let her render unreadable an old e-mail and replace it with a new one, even after it has been sent and opened. She will be able to quash an e-mail with an old pricing scale and send a new one in its place. MailRecall can also make sure an e-mail never makes it outside the walls of the company. "It would be my worst nightmare if the competition knew our product strategy or had our pricing books," she says.

**"If we see something wrong, we'll make sure it doesn't happen again."**

Even as e-mail problems get solved, bosses now also have to worry about instant messaging services *(see related story, below)*. Brokers and traders at Thomas Weisel Partners in San Francisco were using their own personal AOL, MSN and Yahoo IM accounts to share market data. In July 2001 Pamela Housley, director of compliance, shut them down. She worried the messages could be considered a correspondence under certain regulations, thereby forcing her to keep them. "Nothing was being managed," she says.

Two months later, after employees begged to get IM back, Housley installed software from FaceTime of Foster City, Calif. FaceTime feeds all the brokers' IM sessions through a server that screens for phrases such as "guaranteed" or "internal use only," and sends potentially offending chat to compliance officers. "If we see something wrong, we'll make sure it doesn't happen again," she says.

Drug giant Eli Lilly learned firsthand of the hazards of runaway e-mail. In June 2001 an employee e-mailed 669 users of its antidepressant, Prozac, to inform them the company was ending its online pill reminder service. The employee neglected to send the e-mails by blind copy so each recipient could see the names and e-mail addresses of everyone else on the list. The Federal Trade Commission charged Lilly with violating its privacy policy. As part of a settlement, Lilly agreed in January to rewrite its own software to automatically cloak addresses in bulk e-mails. Lilly got off easy. A new federal law punishes health care providers that leak patient data while claiming their systems are secure with up to five years in jail or a $100,000 fine. ■

# Instant Headache

**Getting AOL, Microsoft and other purveyors of instant messaging to work together has been a study in frustration. Can't we all just get along?**

**BY KIRI BLAKELEY**

INSTANT MESSAGING, THAT RAT-A-TAT chat technology that is catching up to e-mail in popularity, still hasn't overcome a critical hurdle that e-mail cleared years ago: utter incompatibility among rival brands.

After three years of mudslinging, the three giants that control 95% of the instant-messaging market—AOL Time Warner with 180 million users, Microsoft with 75 million and Yahoo, 20 million—still refuse to let their customers contact those in rival camps. That means millions of AOL users can't chat online with the folks on Yahoo Instant Messenger or MSN Messenger, and vice versa.

AOL spread IM to the masses in 1997 and a year later paid $287 million in cash for a rival service known as ICQ ("I Seek You"), but it has no plans to reach out to the rest of the world. It cites concern about security and spam. As for interoperability, David Gang, an AOL marketing vice president, says: "I don't think it's a important thing for us to do."

Plenty of customers would disagree. IM technology could let employees safely and easily converse on the fly with suppliers, customers and colleagues. Corporate versions of popular consumer IM soft

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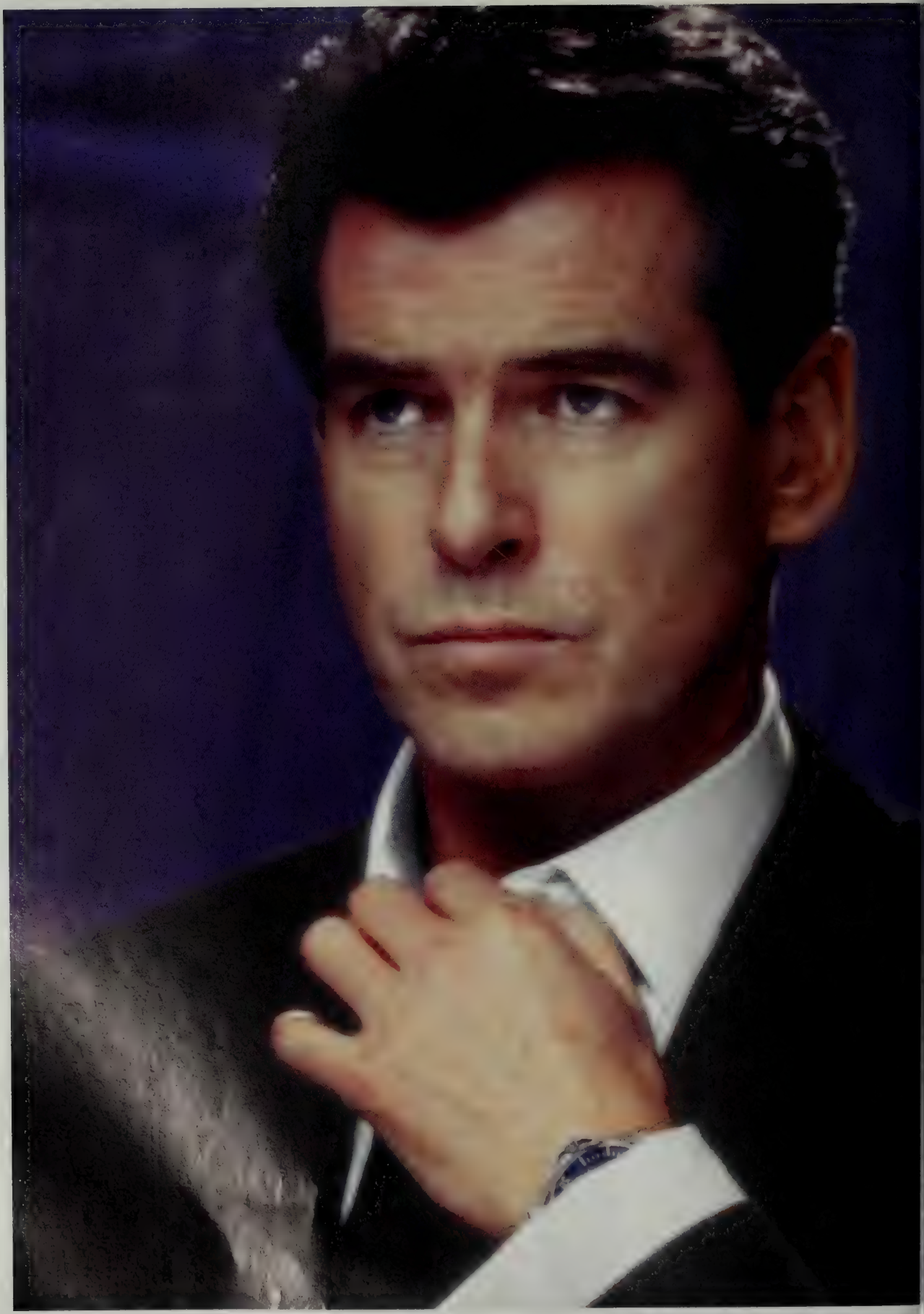

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Equal parts inspiration and frustration: Jabber Chief Robert Balgley.

ware let employees send instant messages safely from behind company firewalls, handle archiving and screen for content. Consultancy IDC says 80 million office workers are currently using IM.

But most companies are waiting for compatibility. Leighton Delvaille, a network administrator for Miami-based wholesaler Southern Wines & Spirits, says he would like a corporate product but can't decide whom to go with because of the interoperability issues. Only 30% of 200 firms surveyed recently bought corporate IM software, says Osterman Research.

"Right now there is a reluctance on the part of a lot of people, both consumers and in business, to use instant messaging because they don't want to get caught in this closed-community conundrum. And as they wait, it holds the market up," says Robert Balgley, chief of Denver-based Jabber, a small IM company making a run at the corporate market.

Jabber aims to solve the interoperability problem. Its consumer IM software can let any user chat with most any other by "spoofing," disguising instant messages as native to the recipient's system. It doesn't link up, though, with users at AOL, which expressly blocks out spoofers. Balgley says he spent nine months in talks to partner up on AOL's corporate product, but "they made it very clear that v would have to" neutrali Jabber's ability to talk competitive systems. AO won't comment, but says i corporate messenger (wi FaceTime as a partner) w be available soon. And n it won't work with mo rival schemes.

**"A lot of people don't want to get caught in a closed-community conundrum."**

Last year Jabber ha $1.3 million in revenu and sales should more tha double this year. Cu tomers include Hewlet Packard, Lehman Brothe and Dresdner Kleinwo Wasserstein. Jabber's con petition in the corpora market includes AOL an IBM's Lotus divisio Yahoo and Microsoft pla corporate products f 2003. In their shadow a upstarts such as FaceTim Divine and Omnipod.

BellSouth uses Jabber f its 1.5 million Internet cu tomers. Although it cou make its messenger intero erable across the board, has yet to do so, using t same logic as the rest: I' not going to open up un the other guys do. "It's as three countries who nev had anything to do wi each other suddenly get together and s 'Let's work out the sticky issues.' It's goi to take time," says Dale Malik, BellSoutl Internet services director.

Seven financial titans, including U Warburg, Lehman Brothers and Merr Lynch, formed a group in August to spe up the process of hammering out sta dards. They need to meet the SEC ma date that all electronic communicati must be stored on a central server. "V would like a standard to be chos quickly," says UBS' Ursula Mills, t group's cochairman.

"The new battleground will take pla in the corporate world," says Jabber's B gley. One scenario: Microsoft adds IM to next version of Windows—game over.

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# The Story They All Got Wrong

Contrary to what you were authoritatively told by the media, our government has no evidence that increased education will raise incomes.

BY DAN SELIGMAN

LAST JULY THE U.S. CENSUS Bureau sent out a press release that appears to have been totally misunderstood by the journalists of America. With, I hasten to add, some exceptions. Or at least one. The release started off proclaiming that a new Census study showed a "big payoff" from education and then proceeded to particularize. It said that characters who hadn't made it through high school were earning, on average, only $18,900 a year in the late 1990s.

Meanwhile, those who had graduated from high school averaged $25,900, college graduates averaged $45,400, and acquirers of professional degrees averaged $99,300, which is possibly why you keep seeing parchment on the wall when you visit a doctor. Converting the annual figures to lifetime earnings (assumed to accrue between ages 25 and 64), the Census Bureau observed that the college graduate outearned the high-school graduate by $2.1 million to $1.2 million, while the professional person was up to $4.4 million.

Springing for the bait, newspapers from coast to coast trumpeted that the country would be better off with more education. According to the lead in the *Seattle Post-Intelligencer* story, "New government data support what your parents

AMANDA DUFFY FOR FORBES

*No. 1*

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have told you all along about staying in school: A good education does pay off." An editorial in the *Portland Press Herald* lamented, in a sentence that speaks for itself: "In Maine, ours is not a well-educated work force." The editorial then went on to argue that the Census data show the need for more community colleges. The *Washington Post* reporter started off with the thought that education has become the "ticket to upward mobility for everyone," and later quoted the coauthor of the Census report, Jennifer Cheeseman Day, on its "bottom-line message" about education: "It pays off for everybody—men, women, whites, blacks, Hispanics."

Is it really clear that the country needs more education? And that society would benefit if everybody got more? It is certainly possible to identify individuals not now going to college who would benefit if they did go. But it seems even easier to identify young persons who are in college and shouldn't be there. The enormous number of college students instantly needing remedial help when they show up on campus surely carries a message. The National Center for Education Statistics tells us that 35.5% of first- and second-year undergraduates report having taken remedial courses—most often in math but also in reading, writing and, getting to the truly clueless, "study skills" (taught to 17.4% of those in remedial programs).

The biggest cliché in statistics is that correlation is not causation—that just because there's a persistent association between two sets of data, we may not conclude that one of the events being measured is causing the other event. It would be very hard to find any serious possibility that the correlation exists mainly because smart people tend to want more education, and smart people are what employers keep looking for: workers who catch on fast, are easy to train, and don't screw up. Many employers have used college degrees as a proxy for intelligence. But if not-so-smart people try to get in on the high-income game by, say, going to college instead of grabbing a job at age 18, they will ultimately find it doesn't pay. The labor markets are quite sophisticated at sniffing out true mental-ability levels.

Employers not bashful about testing can do it in 12 minutes which is the time it takes t administer the Wonderli Personnel Test. This is no given some 2.5 millio times a year to job appli cants in tens of thousand of companies, not to men tion the National Footba League, which gives th test to almost every rookie (A report on the test o CBS SportsLine tells us tha offensive tackles are th smartest guys on the field.

Census Bureau schol ars are probably too intelli gent to confuse correlatio with causation. And yet th study in question seems t say quite clearly that rais ing educational attainmen causes incomes to rise "People decide to go t college for many reason One of the most com pelling is the expectatio of future economic succes based on educationa attainment."

So I called up Jennife Day, the report's coautho and asked a simple ques tion: "Is the payoff fro education or from th ability level that is corre lated with the amount of education? Crisp answer: "Obviously, we can't de cipher that."

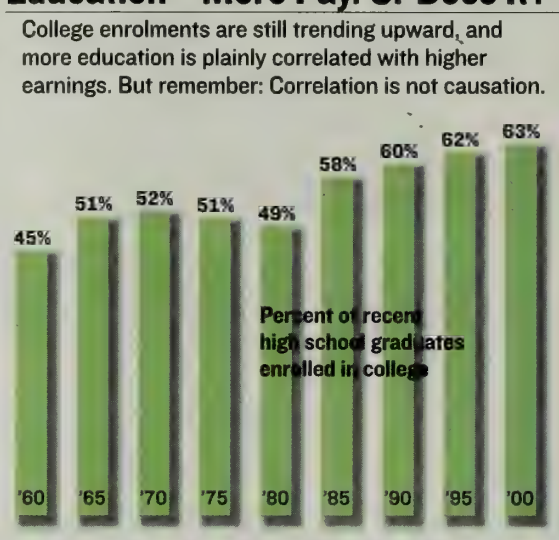
Next question: "What about th proposition that the work force no probably has as much education as it ca use?" Answer: "I don't know."

Final question: "Are there any Censu studies that have tried to relate not edu cation but ability levels to earnings—abi ity levels as measured by, say, IQ?" Una tonishing answer: "Census doesn't real get into IQ."

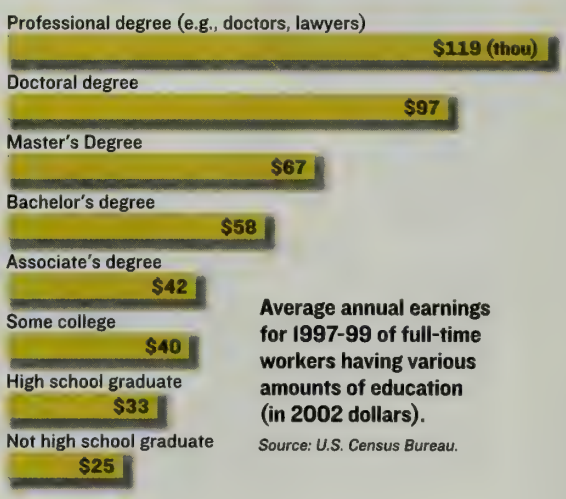
Question for the mighty America media: When do you start runnin corrections?

## Education = More Pay. Or Does It?

College enrolments are still trending upward, and more education is plainly correlated with higher earnings. But remember: Correlation is not causation.




Source: National Center for Education Statistics.




Average annual earnings for 1997-99 of full-time workers having various amounts of education (in 2002 dollars).

Source: U.S. Census Bureau.

## Labor markets are sophisticated at sniffing out mental ability

journalist who hasn't heard that sensible thought all his working life. Yet here we are looking at legions of reporters taking it for granted that the correlation between level of educational attainment and level of income is clear and obvious cause-and-effect.

They are ignoring—just as the Census Bureau is ignoring—the powerful

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# The Virtues of a Virtual Strike

UNTIL THE PRESIDENT STEPPED IN ON OCT. 8 WITH Taft-Hartley, the ten-day dockworker lockout was disrupting the rest of the economy to the tune of more than $10 billion. Yet, a central component of the conflict was 400 union jobs, with all of $20 million a year in potential savings at stake. The collateral damage was 500 times larger than the amounts that the managers were looking to save. And the conflict might well reemerge when the 80-day cooling-off period ends. What a gigantic waste.

It turns out that for more than 50 years there has been a clever idea to virtually eliminate all of the waste of strikes and lockouts without altering the relative bargaining power of labor and management. Instead of a traditional strike, why not have a virtual strike (or virtual lockout) in which the workers keep working as usual and the firm keeps producing as usual, but neither side gets paid?

Workers lose their wages and an employer loses its profits during a strike. So during a virtual strike the workers would work for nothing and the employer would give up its revenues. That money could go to Uncle Sam or a charity. Or the product could be free so that the revenues would be given to customers.

Think of it. During a virtual strike there is no disruption to the rest of the economy. The UPS consumer is not left stranded without service. Management and labor certainly feel the pain and thus have an incentive to settle, but the government or charities or customers get a windfall.

The virtual strike is not just a wild idea waiting to be tested; it's an idea that has already worked. During World War II the Navy used a virtual strike to settle a labor dispute at the Jenkins Brothers valve plant in Bridgeport, Conn. A virtual strike arrangement was also used in a 1960 Miami bus strike. Here, the customers got a free ride, literally.

In 1999 Meridiana Airline's pilots and flight attendants staged Italy's first virtual strike. The employees worked as usual but without being paid, while Meridiana donated the receipts from its flights to charities. The virtual strike worked to perfection. The flights that were virtually struck were not disrupted. Other Italian transport strikes have followed the Meridiana lead. In 2000 Italy's Transport Union forfeited $50,000 from a virtual strike carried out by 300 of its pilots. The virtual pilots' strike provided a public relations opportunity, since the strike payments were used to buy a fancy medical device for a children's hospital. Instead o destroying consumer demanc as in the NBA lockout, the vir tual strike windfall provides ai opportunity to increase th brand's reputation.

Somewhat perversely, th public relations benefit of vir tual strikes may make then harder to implement. Indeed, strike is often designed t inconvenience consumers s that they put pressure on management to settle. Thus, asking a employer to forfeit its profits may not replicate the true costs c a traditional strike. It is notable that in all four historical exam ples, management agreed to forfeit more than its profits—an instead forfeited its entire gross revenue on all sales during th duration of the strike.

Why would workers ever agree to work for nothing? For th same reason that workers are willing to strike now—to impos pain on management. Indeed, during a virtual strike, we migh expect to see labor work harder because every additional sal represents additional pain to the manufacturer, who has to for feit the entire revenue on the sale.

The government is in a perfect position to influence the tw sides to go virtual. And since the government could be th recipient of the strike payments when virtual strikes did occu who knows, the government might even make money. Indeec rather than wait until the strike is real, labor and managemen might agree in advance to employ a virtual strike in the even their next contract negotiations fail. The potential gains fror eliminating the inefficiency of traditional strikes and lockout justify government efforts to experiment with this kind of con flict resolution.

## Smorgasbord of Your Ideas

▸ **Stop Rubbernecking**—Braxton McKee: Put up a big portable blocking screen across the highway divider when there has been a wreck so that people on the other side can't see the accident. Putting ads on the screen would help pay for it and ensure that no one looks at it.

▸ **Forbes 400 list**—Raphael Meyers: Include lifetime charitable contributions in tallying up net worth. This would elevate givers' positions in your list. Value of wealth does not diminish when it is put to good use.

▸ **Military Service**—Aaron Scott: Allow people whose weight and age do not fall within military guidelines an opportunity to serve their nation in a noncombat role. Wouldn't it be best to have a first-class computer programmer in the Army—even if he is, say, 43 years old and 45 pounds overweight?

Forbes.com **Ian Ayres** is Tow[illegible] Professor at Yale Law School. [illegible] Barry Nalebuff is Steinbach Professor at Yale School of Ma[illegible]ent. For more ideas or to send your own, visit www.forbes.co[illegible]ynot.

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# The Dual Bottom Line

No sweat: Immigrant workers at Rob Honeycutt's Timbuk2 share the profits

## Is it possible to invest in low-income areas and create jobs—and make money?

BY ELIZABETH CORCORAN

AT 6 A.M. EVERY MONDA the sewing machine begin buzzing at Timbuk Designs in San Francisco's Mi sion District. A dozen wome most of them Chinese imm grants, sew colorful strips canvas together and add snap and shoulder straps. Togeth they create custom-designe totes that Timbuk2 calls "bil messenger" bags. By each Frid the crew of 25 workers will ha finished a total of 400 bags.

Timbuk2 is a 13-year-o company with more than $3 million in sales, way too mu dane to catch the attention of S icon Valley's venture capitalis So when it needed financing tw years ago, it turned to Silicon Va ley Community Ventures, a fu with a twist. It initially invest $250,000 in the company fo 2.5% stake—with the unde standing that it would pay a "li ing wage" of at least $11 an ho

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to workers and develop a pay incentive program that rewarded them for learning new skills. It later increased its ownership stake to more than 10%.

SVCV is one of about 60 funds nationwide that practice a kind of "good works" investing. They take equity stakes in companies that are improving a low-income community by offering jobs, often with benefits and training. These investors believe the discipline of trying to make a profit is often the best approach to charity. Like any investor, they look for viable businesses and corresponding financial rewards.

These funds manage $460 million in assets, according to New York City-based Community Development Venture Capital Alliance. Most are less than five years old and have yet to fully cash out. One of the earliest such efforts may establish the gold standard. Northeast Ventures in Duluth, Minn. is in the final leg of a 12-year $15 million fund. The crown jewel of those investments has been a software company, Sinex Aviation. Selling out that single investment is expected to recoup the original investment, says Nick Smith, founder of Northeast Ventures, and enable the fund to post an annual return between 12% and 15%.

SVCV was started in 1998 by John (Bud) Colligan of Accel Partners in Palo Alto, Calif. "We wanted to test the idea of whether capital, knowledgeable people and experience could kick-start businesses in low-income communities," he says.

▶ By the Numbers

## Jobs and Money

Silicon Valley Community Ventures takes stakes in companies that are creating jobs in low-income neighborhoods.

**$18.2 million** Money raised for SVCV investment funds. Target: $25 million.

**$3.0 million** Amount of total investments so far in ten companies.

**$11.06** Average hourly wage paid to workers in SVCV's companies.

*Source: Silicon Valley Community Ventures*

> "We wanted to have a business model like Dell's, but potential funders just looked at me like I had three heads."

SVCV created a network of 67 free business advisers from companies including Microsoft, Spectra-Physics and Liquid Engines, who spend five to ten hours a month coaching small and promising companies in low-income neighborhoods. Then, after working with a company for several months, SVCV may invest.

The first fund for SVCV was raised in 2000, and it hit $6.25 million with contributions from investors like the Rockefeller Foundation and Wells Fargo & Co. Its second fund, which includes $10 million from California Public Employees' Retirement System, hopes to reach $25 million by next spring. SVCV has taken stakes ranging from single digits to 20% in ten firms. Its early investments tended to be small, but it plans to make investments of up to $1 million in the future. So far the funding supports companies that employ 560 people, which pay an average of $11 an hour plus benefits.

SVCV became Timbuk2's first outside investor. The company was started in 1989 by Robert Honeycutt, now 43, who worked as a bike messenger in San Francisco f three years until he decided there had be a safer way to make a buck. He boug a sewing machine and designed a carr ing bag that suited his colleagues. Ho eycutt sewed the first bags himself ar sold them wholesale. He began hirin and the business grew in spurts: 10% o year, 70% another.

Thinking bigger, Honeycu wanted to create an online buyi process and started looking for fun ing to buy computers and such. "V wanted to have a business model li Dell's, but potential funders ju looked at me like I had three heads recalls Jordan Reiss, Timbuk2's former vice president. Th he remembered hearing about SVCV while at Stanford Bus ness School. With the funding, Timbuk2 hired 15 people create a Web site and bulk up its production muscle. The W site came to the company's rescue as the economy took downturn. It began to generate sales in October 2000, and n produces nearly half of Timbuk2's revenues.

Even do-gooders get hurt in a downturn. Six of SVCV's t portfolio companies had layoffs. One closed shop altogether. A other filed for bankruptcy, emerging as a nonprofit. A year a SVCV hoped it would provide a 15% annual return by the ti portfolio companies cashed out, about five years after receivi an equity boost. Now Penelope Douglas, SVCV's president, re ons the return will be closer to 10%. An unexpected challen Colligan says, has been finding i vestors that will provide follow-u round funding.

SVCV has yet to cash out any inve ments via a public offering or, m likely, through a sale to a bigger co pany. Cashing out, when it happe could be wrenching. Because SVCV wa to promote local employment, port lio companies would be reluctant to sell out to a larger firm t would change the employment practices. Some companies h clauses in their financing agreements that promise to give the r and file a portion of any windfall from a sale followed by layo Timbuk2 has been lucky. In late September the company closed almost $3 million round of financing led by SVCV that includ major new private investor, a former Cisco executive named M Dwight. In the process, Dwight became Timbuk2's chief executi As a native of Silicon Valley, Dwight is a fan of sharing the rew of a successful company with all of its employees.

At Northeast Ventures, Smith is proud of helping to s entrepreneurship in what have been longtime mining com nities. But he cautions against getting too sentimental ab jobs. "I've seen too much money thrown away when peo were focusing on employment while the business was going hell." In the end, it's still about the bottom line.

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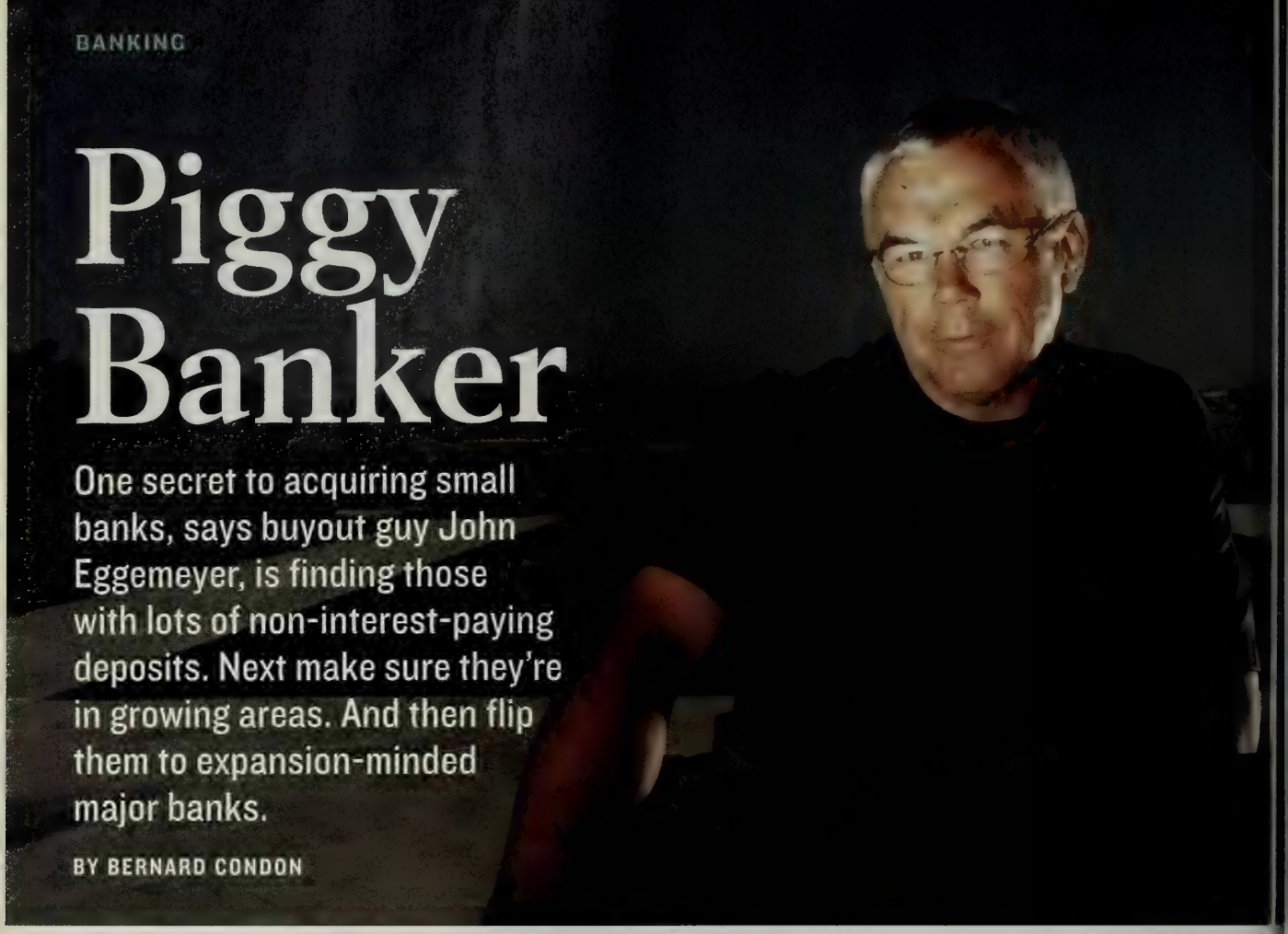
# Piggy Banker



**One secret to acquiring small banks, says buyout guy John Eggemeyer, is finding those with lots of non-interest-paying deposits. Next make sure they're in growing areas. And then flip them to expansion-minded major banks.**

BY BERNARD CONDON

THE GOLDEN BOY HAD TRIPPED UP. AFTER REACHING the heady position of finance chief at Northwest Bancorporation at 35, John Eggemeyer got ousted from two later jobs. He joined Drexel Burnham Lambert only to see it collapse a short while later in 1990. Then he discovered how to turn around his career—by turning around a shaky bank. He visited mega-investor Michael Price to chat about acquiring United Postal at a bargain price. A half-dozen investment firms, worried about the St. Louis bank's stability, had rejected its plan to go public.

Eggemeyer convinced Price to provide the capital to buy United by arguing that its low-cost deposits were the basis for big future profits once the place was restructured. "I can unmask the earnings," he told Price. He did just that, writing off bad loans and then flipping United to a larger bank in 1994. In two years he turned a $34 million investment by Price and a few other rich New York investors into $204 million.

The dapper Eggemeyer, now 56, has since pulled similar stunts with a dozen more banks for his private equity fund, Castle Creek Capital Partners, which he says has returned 28% annually for seven years, after fees.

His formula: Find banks—usually small ones—with at least a third of their deposits paying no interest. In other words, those focusing predominantly on nearby small businesses with money sitting in zero-interest checking accounts. Federal rules don't allow businesses to collect interest on these demand deposits. A billion-dollar company is adept at waltzing around this rule; less-canny million-dollar plumbing wholesaler often is stuck. the banks offer consumer products like certificates of deposi Eggemeyer will refuse to match rival banks' rates, so customer will flee. Why pay all that overhead to service a skillion little con sumer accounts and pay all that pesky interest (now an averag 3.9% yearly for a five-year CD)? At a huge bank company lik Citigroup, which caters to the retail market in addition to global corporate clientele, non-interest-bearing deposits mak up just 10% of its total.

Eggemeyer also likes to buy banks in towns with growin populations. Like most buyout types, Eggemeyer keeps his ey on the exit, and selling out to a bigger bank is easier from growing city. With buyout prices down it makes sense to b picky. In the recession-ridden 12 months ended June 30, acqui ers paid an average 2.3 times tangible book value for sma banks—net assets minus goodwill—versus a slightly higher 2. times four years ago, according to RBC Dain Rauscher.

He won't say what his next likely targets are, but we've com piled a list of banks that meet his criteria *(see table, p. 136)*. Lik Foothill Independent Bancorp in Glendora, Calif., where th population is booming; it pays no interest on 36% of deposits

Eggemeyer exploits what he characterizes as a state of pe manent consolidation in the banking industry. There's no fe that the inventory of small banks will be depleted. New ones a founded all the time, seeking to appeal to people fed up wi

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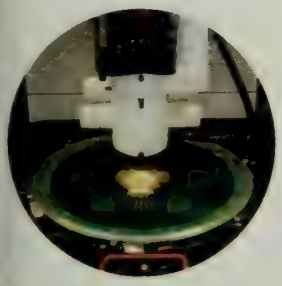

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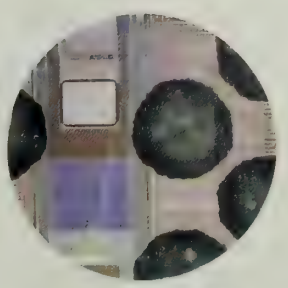

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high-handed treatment from the majors. Since 1999, 636 commercial banks with assets under $100 million were bought out and 574 were created.

Eggemeyer's takeover of United Postal set a pattern: Jettison all but the most basic lending to exploit cheap deposit funding fast. After selling United to Mercantile Bancorporation at two times tangible book, Eggemeyer got Price to help him in a $34 million recapitalization of a small business lender in Bridgeport, Conn., called Lafayette American. Regulators were threatening to seize the $600 million (assets) bank in 60 days, but Eggemeyer thought Lafayette could be resurrected during a time (1993) when the New England economy still was iffy. He wrote off bad loans, cut staff and sold Lafayette to a rival bank, tripling his investment in two years as the region bounced back.

"Those closest to an industry are the last ones to see the trough," he says. "They were discounting the bad loans as if the market wasn't going to recover."

In 1995 Eggemeyer raised $71 million for his Castle Creek fund. The fund's first deal was for a controlling stake in Monarch Bancorp, a one-branch bank in Laguna Niguel, Calif. with $55 million in assets. In six months he had written off or collected more than half of Monarch's bad loans. He then used stock in the bank, renamed Western Bancorp, to buy five other banks with similarly low-cost deposits over the next 2½ years. After chasing out CD holders, he brought Western's cost of funds down to 2%; the average bank was paying 3.7%.

Cheap funds are no use if expenses are too high. Small banks tend to be inefficient. Salaries and other operating expenses eat up 68% of net revenue (in the sense of revenue less interest expense) versus an average 53% at larger banks. So Eggemeyer buys banks near each other and then hacks away. By the time he got through with it, overhead at Western was 50%.

Western bought Santa Monica Bank in 1997 for a rich 2.6 times tangible book, for instance, partly because it had branches near Western that could be closed. It also didn't hurt that Eggemeyer paid in stock, as he does in nearly all his deals. Investors had driven Western shares to five times tangible book value, expecting he would flip the Western chain at an even higher price.

One risk: Investor faith in Eggemeyer's ability to sell at lofty prices can suddenly vanish, along with the high stock price that helps him do deals. In summer 1998 Western shares fell along with other bank shares as fund managers shifted into technology stocks, spooking former shareholders of the Bank of Los Angeles who had sold out to the chain near its peak in April. Some unloaded their Western stock.

Fortunately, the stock eventually recovered, thanks in part to Western's impressive 2.3% return on assets. The stock was still rising in November of the next year when Eggemeyer sold $2.7 billion (assets) Western to Minneapolis-based US Bancorp for $958 million, or 4.2 times tangible book. Those Bank of Lo Angeles shareholders who stayed around got 8% annually. Egg meyer's fund, which had put $45 million into Western over thre years, got $110 million back, or a 50% compound annu return.

Not all his deals have worked out. State National Bancshar of Lubbock, Tex., a privately held bank in which Eggemeye invested $37 million in 1998 for a 26% stake, stumbled after string of six deals in two years. Eggemeyer says he moved to fast. Tellers at a branch outside Fort Worth were still using ledger book to record deposits, for instance, and so couldn't ea ily adjust to their new computers.

The problems at State National is one reason Eggemeyer Castle Creek Capital Partners II, a second fund started in 1998, returning about half as much as his first. (We're taking his wo for the results; these private equity funds do not file financia with the Securities & Exchange Commission.) Both funds a closed to new investors.

He has had better luck with First Community, his late chain. Its origins lay in a 1995 investment in Rancho Santa I National, a California bank hobbled by bad real estate loar Eggemeyer bought a 47% stake for $4 million, then got the fou branch chain to cut overhead and build up a portfolio of sma business loans. He then had Rancho buy another bank neart took them public as First Community in June 2000 and p Western's chief Matthew Wagner in charge. Next addition w Professional Bancorp, a lender to the medical community wi nonperforming loans equal to a scary 10% of assets. But Egg meyer couldn't resist: 46% of its deposits were non-intere bearing. He paid 1.1 times book in January 2001.

Since then First Community has bought another six banl increasing its assets fivefold to $2.1 billion. The cost of funds 0.9% now, versus an average 2.2% for the nation's 8,000 cor mercial banks. But its restructuring still has a ways to go: Retu on assets is 1.3%; the national average is 1.4%. That's why Egg meyer plans to cut overhead from 67% of net revenue to le than 50%.

Eggemeyer is in no rush to sell. In the meantime investo are doing fine: Since First Community shares were first offer to the public two years ago, they've doubled to $30.

## Lack of Interest

These fit Eggemeyer's target profile, paying no interest on a third of deposits. Acquirers likely would cut the high overhead. Small bank average: 68% of net revenue

| Bank | Recent price | Price/ tangible book | Efficiency ratio[1] | Noninterest deposits/ total deposits |
|---|---|---|---|---|
| First Regional Bancorp | $11.31 | 1.2 | 78% | 32% |
| Foothill Independent Bancorp | 20.68 | 2.0 | 64 | 36 |
| Nara Bancorp | 18.65 | 1.6 | 66 | 34 |
| Temecula Valley Bancorp | 11.75 | 2.6 | 74 | 31 |
| Wilshire State Bank | 12.33 | 1.7 | 50 | 31 |

[1]Operating expense as a percent of revenue less interest expense. *Sources: RBC Dain Rauscher; FDIC call reports.*

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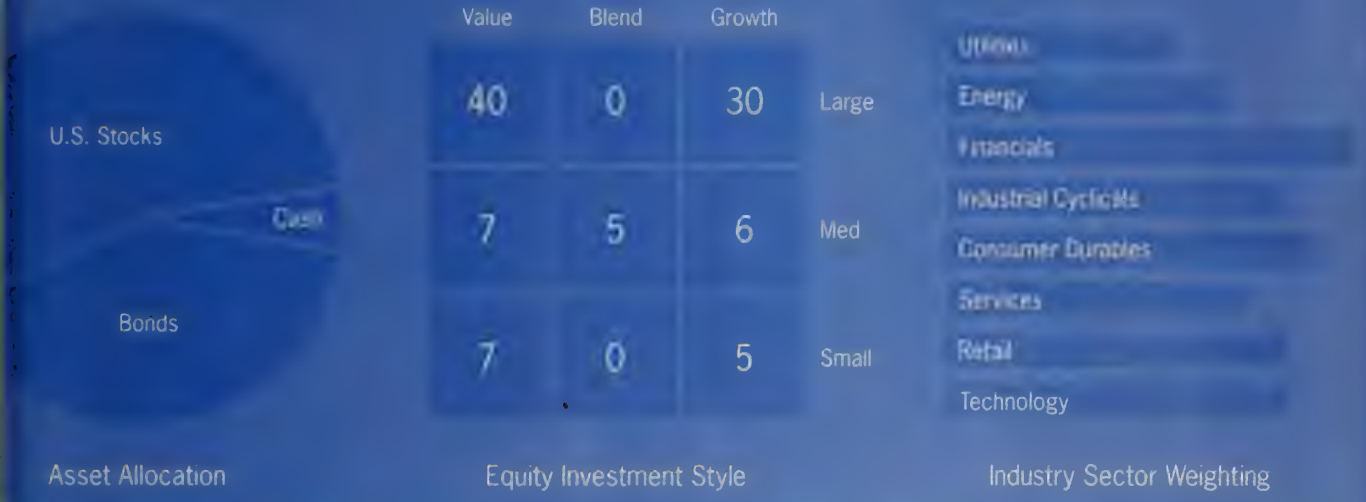


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# Dead Air

CELL PHONES AND THE WIRELESS INDUSTRIES OF THE FUTURE ARE SNARLED BY A CRITICAL SHORTAGE OF AIRWAVES – THE RESULT OF DECADES OF WRONGHEADED, ARCHAIC REGULATIONS. A NEW BAND OF WIRELESS WARRIORS IS FIGHTING TO FREE THE SKIES.

BY SCOTT WOOLLEY

Vanu Bose gazes at blue skies over Boston and dreams of filling them with antastic array of wireless services. He is building new radio receivers not out of wires but in software—smart communica-rs that can be programmed to transmit any sort of signal. Bose's gear could spot empty airwaves and use them to send ▶

SHAWN G. HENRY FOR FORBES

crystal-clear cell calls or blast data to a laptop across town.

The technology to do all of this exists, as does the airspace—most of the aerial spectrum over Boston is essentially devoid of any signals. The one thing Vanu Bose lacks is the right to use the empty air. Over the past century the federal government has carved up the airwaves and given them away to private and special interests ranging from television broadcasters and power utilities to universities and the Catholic Church. The result is that one of America's most valuable natural resources sits paralyzed, consigned to uses that time and technology have long since passed by. Old technologies are swamped with excess airwaves they don't use; newer technologies gasp for airwaves they desperately need; and promising industries of the future are asphyxiated.

It is the bitter irony of America's skies: Open airwaves are everywhere, yet the people desperate to use them cannot.

Television broadcasters have controlled a huge swath of the airwaves (15% of the "prime" radio spectrum) for more than 40 years, yet today that big slice serves only 11 million U.S. homes; cable and satellite serve the other 88% and don't use any prime spectrum to do it. Cellular carriers are assigned only half as much prime space but must serve 137 million customers. So while the vast majority of TV airwaves goes unused, rampant cellular crowding causes blocked, dropped and tinny-soundin calls. A huge band of spectrum doled out in the 1960s sits almo entirely idle, used on occasion to distribute videos to schoo and similar fare—yet is twice as wide as the slice of airwave shared by 20 million users of Wi-Fi, the hottest new wirele industry. Other airwaves serve such arcane uses as the trackin of caribou, flying toy airplanes and accommodating radio emi sions from doughnut fryers. For newcomers like Bose, there nothing.

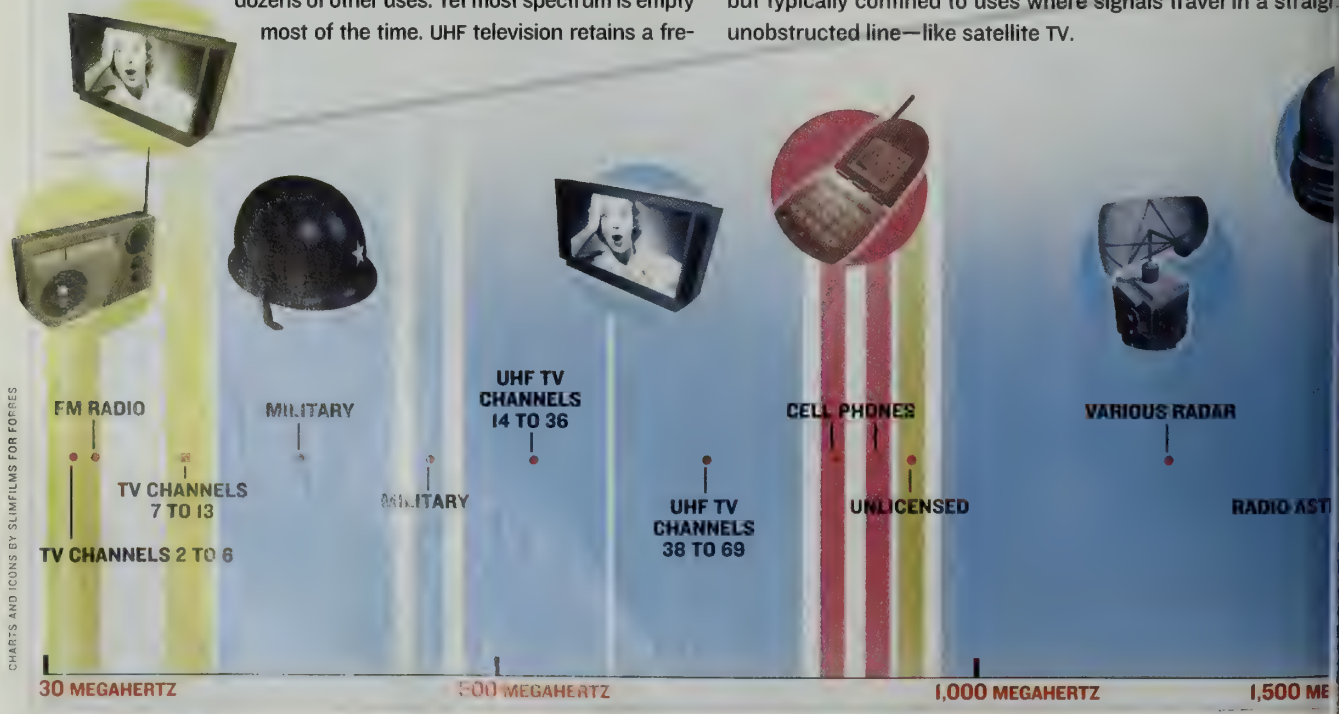
"There's no incentive to build new, flexible equipmen because there is no flexibility in the rules," says Bose, founder upstart Vanu Inc. "It's an egregious waste." Kevin Negus, member of the Tri-County Telephone cooperative in Basi Wyo., who wants to use new "cognitive radios" to shoot fa Internet access to his neighbors' ranches, adds: "The spectrum completely, overwhelmingly, unbelievably underutilized. Yet it illegal for us to do the logical thing."

Such frustration has reached a boiling point in high tec as today's unprecedented pace of wireless breakthroughs—combined with access to abundant, affordable spectrum—may offer the best hope for reviving a devastated busines The promise of freer skies is tantalizing. Intel just discovere

# Gasping for Airwaves

ONLY CERTAIN RADIO SIGNALS HAVE THE ABILITY TO EASILY PENETRATE walls and travel long distances at low power—together these frequencies are comprised in a precious—and limited—natural resource known as the prime radio spectrum. The prime spectrum is divided up between FM radio, TV, cell phones, radio telescopes and dozens of other uses. Yet most spectrum is empty most of the time. UHF television retains a frequency band big enough for 55 channels, though few cities ha more than a couple, and those are rarely watched. Meanwhile, c phones and unlicensed bands are packed to the bursting.

The prime spectrum is on the low end of the larger electr magnetic spectrum. Higher frequency signals are also valuabl but typically confined to uses where signals travel in a straig unobstructed line—like satellite TV.




CHARTS AND ICONS BY SLIMFILMS FOR FORBES

*Sources: FCC, National Telecommunications & Information Administration; Wireless Spectrum Finder.*

ow to build entire radios in silicon chips and vows to send ireless communications costs plummeting at the same rate s the price of computing power. Other wireless technologies ith names like "cognitive radio," "ultrawideband," "soft-are-defined radio" and "mesh networks" show equally stun-ing potential *(see box, p. 150)*.

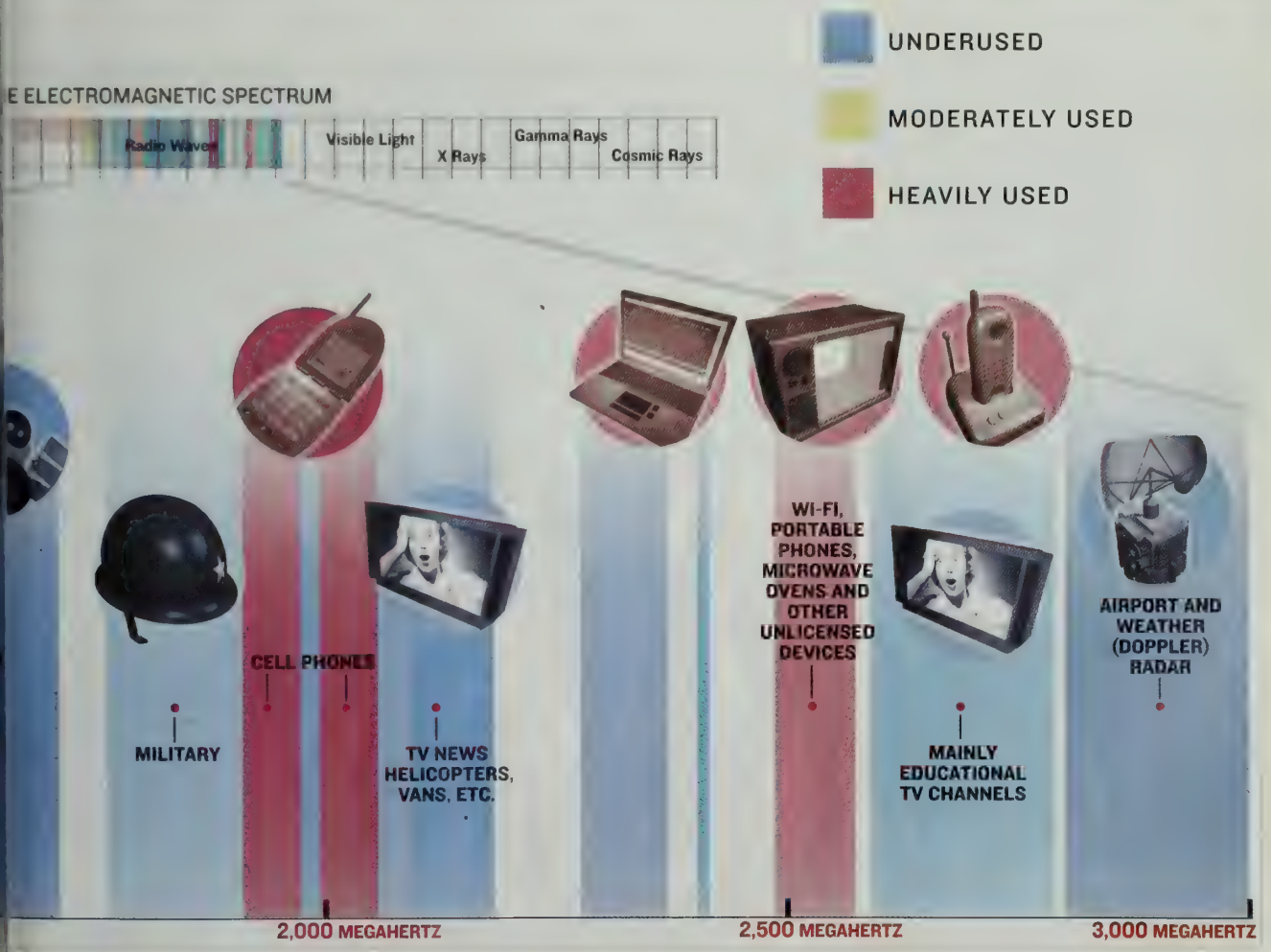
"Wireless technologies only work if they have spectrum to n on, but most of the spectrum is empty most of the time. It's bsurd," says Dennis Roberson, Motorola's chief technology fficer. Intel's top technology officer, Patrick Gelsinger, figures ell over 90% of the airwaves go unused at any time. "If any ther natural resource was this underutilized, it would be con-dered a national travesty," he says.

America's paralysis of the airwaves may, at long last, be ured. A new breed of wireless warriors, backed by powerful lies in Silicon Valley and in the Bush Administration, leads the ght. Many techies want to let the free market—not federal ureaucrats—decide how to use the spectrum. Another group rusades to create more of a public highway model, opening uge swaths of "unlicensed" airwaves to any and all users. This incer movement may finally pry spectrum away from the pow-rful incumbents that grabbed it, free of charge, decades ago.

"It seems to me universally obvious that this current model will crumble," says FCC Chairman Michael Powell. "Market forces must replace a laborious process of government command and control." At his behest, an advisory panel is about to issue a policy paper recommending an overhaul of the entire antiquated system of regulating the airwaves.

Yet all this incipient innovation may get snuffed out by a government that prefers to use the spectrum's artificial scarcity to sell slivers of air at mind-boggling prices. In recent years companies—mostly cell phone carriers—have bid over $30 billion for access to a mere 5% of the prime spectrum. It is a policy suitable to OPEC: Restrict output and try to run up the price.

Radio spectrum may be the most valuable natural resource of the information age, carrying every form of wireless communication, from FM radio to television to cell phone calls to Wi-Fi to military radar *(see chart below)*. The prime portion consists of the frequencies running from 30 to 3,000 megahertz, prized for their ability to penetrate buildings (which is why radios and cell phones work indoors) and transmit over long distances at low power (which lets batteries run longer and limits potentially harmful radiation). The "hertz" in question is a measure of how many times per second a wave oscillates. It describes not only



where to tune a receiver to capture the wave but how much information-carrying capacity the wave has.

FM radio runs from 88 megahertz to 108 megahertz (the endpoints on your FM dial), so it takes up 20 megahertz of bandwidth, or 0.6% of the prime spectrum. Since radio waves die out as they travel farther, the same slice of spectrum can be reused in different locations—an FM radio station at 91.1 megahertz in San Diego doesn't interfere with the one at 91.1 in San Francisco. Cellular providers expand their capacity by shrinking the cells and using the same frequency simultaneously in different parts of town. The artificial spectrum shortage is a main reason 131,000 cell sites now litter the country.

Guglielmo Marconi first used the spectrum to send a radio signal across the Atlantic 101 years ago. It astounded the world and in the century that followed advances in wireless communications consistently surprised planners who thought they understood the best uses for the airwaves and their limits.

The government first got involved in regulating the airwaves in 1912 after the sinking of the *Titanic* raised fears that congested airwaves couldn't carry vital information in a time of crisis. Congress responded with the Radio Act of 1912, requiring all broadcasters to register with the government. Thus began an era in which the airwaves were seen as a scarce natural resource too important to be entrusted to the free market. Instead, federal bureaucrats would decide the best uses and hand out free licenses to worthy applicants.

Chopping up and assigning the airwaves began in earnes in 1927, when broadcasters successfully pushed for the creatio of the Federal Radio Commission, which seven years late became the FCC. The subsequent giveaway amounted to th biggest handout of public assets since the land grants to th railroads. The railroads at least got freely transferrable land, s that over time there was nothing to inhibit the use of the lan for its most profitable purpose. Radio spectrum, in contrast, i frozen in anachronistic uses. "What other system allocate scarce resources this way? The Soviet Union," says Gerald Faul haber, who was the FCC's chief economist at the end of th Clinton Administration.

Almost immediately after Congress began to license the air waves, broadcasting interests began gaming the system to bloc competition. In the 1920s, as the popularity of AM radio ex ploded, incumbents began worrying that the government migh expand the band beyond its initial 1.07-megahertz width. Mor spectrum would yield more stations and choices for consumers— but also produce more competition. So the band was frozen. In cumbents have repeatedly used the FCC to delay or block ne technologies, admits Powell. "Let me tell you something everyon already knows: Companies don't like competition," he says.

Cities began grabbing free spectrum in the late 1920 prompted by the Detroit police department's pioneering use c

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radios to help tail bootleggers in 1928. Today local governments use 72 megahertz of prime spectrum for police and fire dispatching and other uses, but they use it extremely poorly. Their analog radios are so archaic they typically swallow at least 10 times more spectrum per call than a modern cell phone does. The public networks are so inefficient that 80% of local governments turn to the crowded private airwaves for backup.

Built to be more reliable, public networks often are just the opposite. After the World Trade Center terror attack—when the New York Fire Department's ancient network failed, contributing to the deaths of dozens of firefighters—the Bush Administration pushed for $240 million to give public safety workers priority access to cell networks. A better fix would be to change federal laws barring municipalities from selling their unused (and underused) spectrum to more efficient operators, says Martin Cave, a British economist who has studied the problem. "Both sides could benefit tremendously," he says.

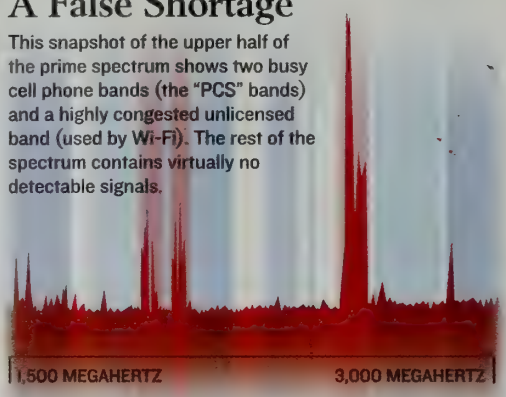
In 1945 the FCC accelerated the spectrum giveaway. It licensed the VHF television channels, numbering them 2 to 13, with each channel getting 6 megahertz of prime spectrum. In 1952, as broadcasters flourished, the FCC created the UHF spectrum, which now spans 330 megahertz on channels 14 through 69. What looked sensible then turned out to be terribly wrong later. Cable TV took off in the 1970s and today serves 70% of U.S. homes. In the 1990s satellite hit the scene and now serves 18% of homes.

Thus has broadcast TV become a through-the-looking-glass world where local stations beam their programming to cable and satellite systems directly; their over-the-air signals, used by only 11% of homes, have been reduced to a regulatory ritual. That is because TV stations persuaded Congress to pass "must-carry" laws in 1992 that force cable systems to carry every local VHF and UHF station that beams a signal into the air. (DirecTV and other satellite services must abide by similar fiats.) Ostensibly these rules were designed to protect local programming, but in practice they clutter the airwaves with unwatched signals. Pax TV, the nation's largest broadcast group with 65 UHF stations across the nation, airs infomercials for salad shooters and other gadgets for much of the day. In the evening it runs low-budget fare such as *Supermarket Sweep* and *Miracle Pets*. And by law cable systems must retransmit all of it.

The cockeyed federal laws have sparked an *increase* in the number of over-the-air TV stations filling the prime spectrum. In the past decade, as the number of antenna-only households fell from 33 million to 11 million, the numb of UHF stations filling the sky wi signals rose from 581 to 752. Co gress and the FCC, far from bein chastened by this sorry record, no are compounding the problem l handing broadcasters a whole ne chunk of free spectrum for digit television *(see box, p. 149)*.

## A False Shortage

This snapshot of the upper half of the prime spectrum shows two busy cell phone bands (the "PCS" bands) and a highly congested unlicensed band (used by Wi-Fi). The rest of the spectrum contains virtually no detectable signals.




*Source: Courtesy of Agilent Technologies, measured in Santa Rosa, Calif.*

Thomas Hazlett, a former FC chief economist now with the Ma hattan Institute, argues an easy sol tion would be to declare the obviou that broadcast is dying, and the enti UHF portion should be put out of misery. "After all, this is a produ that 88% of the population pays money to avoid," he says.

No way, says Lowell (Bud) Paxson of Pax TV, the self-styl leader of the broadcasters. In his view, the airwaves his 65 st tions use belong to him. He compares himself to "one of t Beverly Hillbillies," who found oil under his land and therefo deserves to become rich. "The free enterprise system is abo people working hard and making money, or getting lucky a making money," he says.

Congress in 1977 passed a plan to clear channels 52 to (leaving broadcasters with 77% of their total spectrum) for n technologies. But the muddled scheme lacked a meaningf deadline by which broadcasters must vacate the air. Paxs freely admits other people would put the spectrum to mu more valuable use, and with his fellow broadcasters he h formed a "spectrum clearing alliance" to negotiate a turnover new users. They insist on just one condition: They want to s the spectrum at market prices and pocket the profit.

**"WIRELESS TECHNOLOGIES ONLY WORK IF THEY HAVE SPECTRUM TO RUN ON, BUT MOST OF THE SPECTRUM IS EMPTY MOST OF THE TIME. IT'S ABSURD."**

It would be *all* profit. Like almost all current spectrum use Paxson never paid the government a dime for his licenses. Broa cast TV licenses expire after seven years and specifically state t they are not titles of ownership. But Paxson views such details as relevant, arguing that spectrum licensees have long had an "e pectation of renewal." Essentially, he wants to hold the air for ra som. "I'd love to see an act of Congress saying they were denyi license renewal," he says. "It would be in the courts for seven year

Other lucky licensees already turn their rights into rea cash. In the 1960s the FCC granted colleges, universities a nonprofit high schools the right to send out educational tele sion programs on a 186-megahertz chunk of spectrum. Deca later some of them lease out airspace to carriers such as Spr and WorldCom. The college lobbying group argues that renti out airwaves at a profit serves an important public function: creates valuable revenue for these schools, freeing up tax doll for other purposes." Unanswered: Why a public subsidy—e

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• Adverse events possibly, probably or definitely related to use of And[illegible] year follow up (n=106) across all [illegible] dose levels reported in at least [illegible]2% of patients included application site reaction 9.4%, prostate [illegible] disorder 8.5%, acne 5.7%, and [illegible] lab test abnormal 4.7%.

• Androgens are contraindicated in men with carc[illegible] of the breast, or known or suspected carcinoma [illegible] prostate. Geriatric patients treated with androger[illegible] be at an increased risk for the development of pr[illegible] hyperplasia and prostatic carcinoma.

• To minimize the potential transfer of testost[illegible] to another person, patients should wash their [illegible] immediately with soap and water after applicat[illegible] AndroGel®. They should cover the application [illegible] with clothing after the gel has dried.

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**Please see brief summary of prescribing inform[illegible]**

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An estimated 4-5 million American men have a medical condition called hypogonadism, or low testosterone.[1] These low testosterone levels can cause a number of different symptoms such as low sex drive, fatigue, depression, and even loss of height or strength. Your doctor can check your testosterone level with a simple blood test.

Fortunately you can replace testosterone with AndroGel® which delivers natural testosterone in a gel that you simply rub into your skin – no patches or injections. As it's absorbed through your skin, AndroGel treats hypogonadism by restoring your testosterone to its normal range.

1. www.fda.gov/fdac/departs/196_upd.html, accessed May 17, 2002

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## INDICATIONS AND USAGE

AndroGel® is indicated for replacement therapy in males for conditions associated with a deficiency or absence of endogenous testosterone:

1. Primary hypogonadism (congenital or acquired)—testicular failure due to cryptorchidism, bilateral torsion, orchitis, vanishing testis syndrome, orchiectomy, Klinefelter's syndrome, chemotherapy, or toxic damage from alcohol or heavy metals. These men usually have low serum testosterone levels and gonadotropins (FSH, LH) above the normal range.
2. Hypogonadotropic hypogonadism (congenital or acquired)—idiopathic gonadotropin or luteinizing hormone-releasing hormone (LHRH) deficiency or pituitary-hypothalamic injury from tumors, trauma, or radiation. These men have low testosterone serum levels but have gonadotropins in the normal or low range.

AndroGel® has not been clinically evaluated in males under 18 years of age.

## CONTRAINDICATIONS

Androgens are contraindicated in men with carcinoma of the breast or known or suspected carcinoma of the prostate.

AndroGel® is not indicated for use in women, has not been evaluated in women, and must not be used in women.

Pregnant women should avoid skin contact with AndroGel® application sites in men. Testosterone may cause fetal harm. In the event that unwashed or unclothed skin to which AndroGel® has been applied does come in direct contact with the skin of a pregnant woman, the general area of contact on the woman should be washed with soap and water as soon as possible. *In vitro* studies show that residual testosterone is removed from the skin surface by washing with soap and water.

AndroGel® should not be used in patients with known hypersensitivity to any of its ingredients, including testosterone USP that is chemically synthesized from soy.

## WARNINGS

1. Prolonged use of high doses of orally active 17-alpha-alkyl androgens (e.g., methyltestosterone) has been associated with serious hepatic adverse effects (peliosis hepatis, hepatic neoplasms, cholestatic hepatitis, and jaundice). Peliosis hepatis can be a life-threatening or fatal complication. Long-term therapy with testosterone enanthate, which elevates blood levels for prolonged periods, has produced multiple hepatic adenomas. Testosterone is not known to produce these adverse effects.
2. Geriatric patients treated with androgens may be at an increased risk for the development of prostatic hyperplasia and prostatic carcinoma.
3. Geriatric patients and other patients with clinical or demographic characteristics that are recognized to be associated with an increased risk of prostate cancer should be evaluated for the presence of prostate cancer prior to initiation of testosterone replacement therapy. In men receiving testosterone replacement therapy, surveillance for prostate cancer should be consistent with current practices for eugonadal men (see PRECAUTIONS: Carcinogenesis, Mutagenesis, Impairment of Fertility and Laboratory Tests).
4. Edema with or without congestive heart failure may be a serious complication in patients with preexisting cardiac, renal, or hepatic disease. In addition to discontinuation of the drug, diuretic therapy may be required.
5. Gynecomastia frequently develops and occasionally persists in patients being treated for hypogonadism
6. The treatment of hypogonadal men with testosterone esters may potentiate sleep apnea in some patients, especially those with risk factors such as obesity or chronic lung diseases.

## PRECAUTIONS

Transfer of testosterone to another person can occur when vigorous skin-to-skin contact is made with the application site (see Clinical Studies). The following precautions are recommended to minimize potential transfer of testosterone from AndroGel®-treated skin to another person:

- Patients should wash their hands immediately with soap and water after application of AndroGel®
- Patients should cover the application site(s) with clothing after the gel has dried (e.g., a shirt)
- In the event that unwashed [illegible] AndroGel® has been applied does come in direct contact with the skin of another person, the general area of contact on the other person should be washed with soap and water as soon as possible. *In vitro* studies show that residual testosterone is removed from the skin surface by washing with soap and water.

Changes in body hair distribution, significant increase in acne, or other signs of virilization of the female partner should be brought to the attention of a physician

General

The physician should instruct patients to report any of the following:

- Too frequent or persistent erections of the [illegible]
- Any nausea, vomiting, changes in skin color or ankles swelling.
- Breathing disturbances, including those associated with sleep.

Information for Patients

Advise patients to carefully read the information brochure that accompanies each carton of 30 AndroGel® single-use packets.

Advise patients of the following:

- AndroGel® should not be applied to the scrotum.
- AndroGel® should be applied once daily to clean, dry skin.
- After application of AndroGel,® it is currently unknown for how long showering or swimming should be delayed. For optimal absorption of testosterone, it appears reasonable to wait at least 5-6 hours after application prior to showering or swimming. Nevertheless, showering or swimming after just 1 hour should have a minimal effect on the amount of AndroGel® absorbed if done very infrequently.

Laboratory Tests

1. Hemoglobin and hematocrit levels should be checked periodically (to detect polycythemia) in patients on long-term androgen therapy.
2. Liver function, prostatic specific antigen, cholesterol, and high-density lipoprotein should be checked periodically.
3. To ensure proper dosing, serum testosterone concentrations should be measured (see DOSAGE AND ADMINISTRATION).

Drug Interactions

Oxyphenbutazone: Concurrent administration of oxyphenbutazone and androgens may result in elevated serum levels of oxyphenbutazone.

Insulin: In diabetic patients, the metabolic effects of androgens may decrease blood glucose and, therefore, insulin requirements.

Propranolol: In a published pharmacokinetic study of an injectable testosterone product, administration of testosterone cypionate led to an increased clearance of propranolol in the majority of men tested.

Corticosteroids: The concurrent administration of testosterone with ACTH or corticosteroids may enhance edema formation; thus, these drugs should be administered cautiously, particularly in patients with cardiac or hepatic disease.

Drug/Laboratory Test Interactions

Androgens may decrease levels of thyroxin-binding globulin, resulting in decreased total T4 serum levels and increased resin uptake of T3 and T4. Free thyroid hormone levels remain unchanged, however, and there is no clinical evidence of thyroid dysfunction.

Carcinogenesis, Mutagenesis, Impairment of Fertility

Animal Data: Testosterone has been tested by subcutaneous injection and implantation in mice and rats. In mice, the implant induced cervical-uterine tumors, which metastasized in some cases. There is suggestive evidence that injection of testosterone into some strains of female mice increases their susceptibility to hepatoma. Testosterone is also known to increase the number of tumors and decrease the degree of differentiation of chemically induced carcinomas of the liver in rats.

Human Data: There are rare reports of hepatocellular carcinoma in patients receiving long-term oral therapy with androgens in high doses. Withdrawal of the drugs did not lead to regression of the tumors in all cases.

Geriatric patients treated with androgens may be at an increased risk for the development of prostatic hyperplasia and prostatic carcinoma.

Geriatric patients and other patients with clinical or demographic characteristics that are recognized to be associated with an increased risk of prostate cancer should be evaluated for the presence of prostate cancer prior to initiation of testosterone replacement therapy.

In men receiving testosterone replacement therapy, surveillance for prostate cancer should be consistent with current practices for eugonadal men.

Pregnancy Category X (see Contraindications)—Teratogenic Effects: AndroGel® is not indicated for women and must not be used in women.

Nursing Mothers: AndroGel® is not indicated for women and must not be used in women.

Pediatric Use: Safety and efficacy of AndroGel® in pediatric patients have not been established.

## ADVERSE REACTIONS

In a controlled clinical study, 154 patients were treated with AndroGel® for up to 6 months. Adverse Events possibly, probably or definitely related to the use of AndroGel® and reported by ≥1% of the patients are listed in Table 1.

**Table 1. Adverse Events Possibly, Probably or Definitely Related to Use of AndroGel® in the Controlled Clinical Trial**

| Adverse Event | 5 G | 7.5 G | 10 G |
|---|---|---|---|
| Acne | 1% | 3% | 8% |
| Alopecia | 1% | 0% | 1% |
| Application Site Reaction | 5% | 3% | 4% |
| Asthenia | 0% | 3% | 1% |
| Depression | 1% | 0% | 1% |
| Emotional Lability | 0% | 3% | 3% |
| Gynecomastia | 1% | 0% | 3% |
| Headache | 4% | 3% | 0% |
| Hypertension | 3% | 0% | 3% |
| Lab Test Abnormal* | 6% | 5% | 3% |
| Libido Decreased | 0% | 3% | 1% |
| Nervousness | 0% | 3% | 1% |
| Pain Breast | 1% | 3% | 1% |
| Prostate Disorder** | 3% | 3% | 5% |
| Testis Disorder | 3% | 0% | 0% |

**Lab test abnormal* occurred in nine patients with one or more of the following events: elevated hemoglobin or hematocrit, hyperlipidemia, elevated triglycerides, hypokalemia, decreased HDL, elevated glucose, elevated creatinine, or elevated total bilirubin

***Prostate disorders* included five patients with enlarged prostate, one patient with BPH, and one patient with elevated PSA results.

The following adverse events possibly related to the use of AndroGel® occurred in fewer than 1% of patients: amnesia, anxiety, discolored hair, dizziness, dry skin, hirsutism, hostilit impaired urination, paresthesia, penis disorder, peripheral edema, sweating, and vasodilation.

In this clinical trial of AndroGel,® skin reactions at the site of application were occasionally reported with AndroGel,® but was severe enough to require treatment or discontinuation drug.

Six (4%) patients in this trial had adverse events that led to discontinuation of AndroGel.® These events included the following: cerebral hemorrhage, convulsion (neither of whic were considered related to AndroGel® administration), depression, sadness, memory loss, elevated prostate specific antigen and hypertension. No AndroGel® patients discontin due to skin reactions.

In an uncontrolled pharmacokinetic study of 10 patients, tw had adverse events associated with AndroGel®; these were asthenia and depression in one patient and increased libido hyperkinesia in the other. Among 17 patients in foreign clin studies there was 1 instance each of acne, erythema and be prostate adenoma associated with a 2.5% testosterone gel formulation applied dermally.

One hundred six (106) patients have received AndroGel® for to 12 months in a long-term follow-up study for patients wh completed the controlled clinical trial. The preliminary safet results from this study are consistent with those reported fo controlled clinical trial. Table 2 summarizes those adverse ev possibly, probably or definitely related to the use of Androc and reported by at least 1% of the total number of patient during long-term exposure to AndroGel.®

**Table 2. Incidence of Adverse Events Possibly, Probably Definitely Related to the Use of AndroGel® in the Long-Term, Follow-up Study**

| | Dose of AndroGel® | | |
|---|---|---|---|
| Adverse Event | 5 G | 7.5 G | 10 |
| Lab Test Abnormal* | 4.2% | 0.0% | 6. |
| Peripheral Edema | 1.4% | 0.0% | 3. |
| Acne | 2.8% | 0.0% | 12. |
| Application Site Reaction | 9.7% | 10.0% | 3. |
| Prostate Disorder** | 2.8% | 5.0% | 18. |
| Urination Impaired | 2.8% | 0.0% | 0. |

**Lab test abnormal* included one patient each with elevat GGTP, elevated hematocrit and hemoglobin, increased to bilirubin, worsened hyperlipidemia, decreased HDL, and hypokalemia.

***Prostate disorders* included enlarged prostate, elevated P results, and in one patient, a new diagnosis of prostate c three patients (one taking 7.5 G daily and two taking 10 daily) discontinued AndroGel® treatment during the long study because of such disorders.

## DRUG ABUSE AND DEPENDENCE

AndroGel® contains testosterone, a Schedule III controlled substance as defined by the Anabolic Steroids Control Act.

Oral ingestion of AndroGel® will not result in clinically signif serum testosterone concentrations due to extensive first-pas metabolism.

## OVERDOSAGE

There is one report of acute overdosage by injection of testosterone enanthate: testosterone levels of up to 11,400 were implicated in a cerebrovascular accident.

## DOSAGE AND ADMINISTRATION

The recommended starting dose of AndroGel® 1% is 5 G delivering 5 mg of testosterone systemically, applied once d (preferably in the morning) to clean, dry, intact skin of the shoulders and upper arms and/or abdomen. Upon opening packet(s), the entire contents should be squeezed into the p of the hand and immediately applied to the application site Application sites should be allowed to dry for a few minute to dressing. Hands should be washed with soap and water a AndroGel® has been applied.

Do not apply AndroGel® to the genitals.

Serum testosterone levels should be measured approximateh 14 days after initiation of therapy to ensure proper dosing. I serum testosterone concentration is below the normal range the desired clinical response is not achieved, the daily Andro 1% dose may be increased from 5 G to 7.5 G and from 7.5 G 10 G as instructed by the physician.

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## Digital Disaster

Congress tried mightily to free a major block of spectrum as part of the Balanced Budget Act of 1997. The law has proven worse than useless. The act intends to shift the nation's TV broadcasters from analog to digital, handing them free digital spectrum and pushing them off the older airwaves. Five years later they have done little with the huge giveaway and delayed the required exit from their current airspace. And the FCC has just compounded the problem.

The 1997 law aimed to complete the switch to new airwaves by 2006—a deadline everyone admits will be missed. There was an out: Broadcasters don't have to vacate their current slots until 85% of homes have TVs that can receive digital signals.

The escape clause ensures the broadcasters won't have to leave behind their old spectrum for years more. That is because 90% of homes don't need or want over-the-air tuners at all—they get their TV by cable or satellite. Moving to speed the transition, the FCC in August passed a new rule that forces digital tuners on everyone. The new rule states that most TV sets sold in the U.S. must carry a digital tuner for over-the-air reception by 2007, adding anywhere between $16 and $100 to the cost of a set.

FCC Chair Powell.

The digital handout was poorly handled, too. Congress gave each broadcaster as much bandwidth as it got under the old scheme—6 megahertz. But digital technology will let a broadcaster offer six channels instead of just one. So now these antiquated entertainers are invoking another FCC fiat—"must carry" rules—to demand that cable systems carry six outlets instead of one.

To summarize FCC policy: Force the public to buy pricier TVs with tuners 90% of them don't need, to reclaim airwaves the public already owns—from broadcasters that never paid a dime for them. It is difficult to decide which part of that makes the least sense. —*S.W.*

worthwhile one—should be delivered by squatter's rights.

The single biggest holder of prime spectrum is the U.S. military. The armed forces control roughly 500 megahertz for radar, battlefield radios, smart bombs and countless other uses. The military has exclusive access to much of its spectrum, so that ces used over Nellis Air Force Base in Nevada or Pearl Harbor Hawaii are left empty in every city from Cody, Wyo. to oston—even though the military doesn't make use of them. ssistant Secretary of Defense John Stenbit says civilian access ould interfere with important training exercises.

But FCC Chairman Powell counters that, while such conrns are at times legitimate, "often it is a huge red herring that ally masks the objection to the basic principle that anybody ould have to share 'my stuff.' It's important to remember it's e public's stuff." He adds: "We have had a major ideological ruggle this year with very different constituencies, the Department of Defense and others."

The military's stance strikes many radio engineers as silly. hile the FCC can stop Americans from transmitting on certain equencies at home, it can't control what happens overseas, here wars tend to be fought. The spectrum most of the world ll use for next-generation cell phones, for instance, is specum the military insists on keeping to itself in the U.S.

"If a military radar stops working when someone turns on eir wireless local area network, what happens in a war?" says vin Kahn, a senior Intel executive. "You can't run out onto the ttlefield and ask the enemy to turn their network off." He also ints out that the military is unmatched in its ability to deal th intentional radio interference, let alone consumer gadgets.

While this decades-old mess finally may hit a breaking point, a solution has been around since 1959. Economist Ronald Coase, who would go on to win the Nobel Prize, studied the matter and proposed a simple idea to Congress: Let free markets, not bureaucratic dictates, govern spectrum. Treat spectrum licenses like patents or other intangible private property, he argued, and markets can take care of the rest. "Is this all a big joke?" FCC Commissioner Philip Cross famously asked Coase at one hearing back then.

Coase's heresy is now economic orthodoxy: He won the 1991 Nobel Prize in economics largely for his idea that well-defined property rights will lead to an efficient allocation of any resource, including spectrum, so long as the cost of negotiating deals is reasonable. Last year a group of 37 economists, including six former FCC chief economists and Coase himself, urged the commission to remove sclerotic regulations and create spectrum markets. They decried a torpid system ruled by licensees and pliant regulators: "Unnecessary restrictions prevent beneficial uses of spectrum. Over time these regulatory rigidities can discourage innovation altogether."

**CURRENT AIRWAVE USERS, WHO GOT LICENSES FOR FREE "OFTEN OBJECT THAT ANYBODY WOULD GET TO SHARE 'MY STUFF.' IT'S THE PUBLIC'S STUFF."**

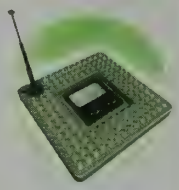
The military and other government entities that control spectrum today could participate in the market for spectrum along with private companies, says economist Martin Cave, who headed a study on spectrum reform for the British government. The U.K. has experimented with a system that charges agencies a price for the spectrum they use and increases their funding to offset the new cost. "Then if you can economize on spectrum, you can keep the difference," Cave says. Says David Wye, chief of spectrum policy at AT&T Wireless: "[Cities] have to buy police cars. They have to buy fire trucks. They have to buy the gas that powers those vehicles. Why don't they have to buy the fuel that powers the radios?"

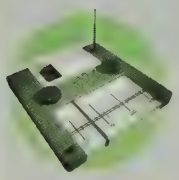
# Asphyxiated

New wireless technologies have great potential—and a bleak future—unless Washington frees up underused airwaves.

COGNITIVE RADIO. Today's wireless devices jam up when they come across other signals. Cognitive radios can sense interference and jump to an empty frequency.

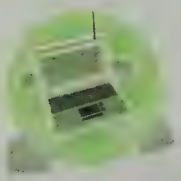
SOFTWARE-DEFINED RADIO. Most radios can receive and transmit one type of signal at one range of frequency. New gadgets can build basic functions out of software—a cell phone could regear to tap an incompatible network, and then turn itself into a garage-door opener or TV remote.





ULTRAWIDEBAND. By transmitting very low power radio signals across a huge range of frequencies, new gear can do an array of cool tricks, such as peering through solid objects (without the X ray's radiation issues). Earlier this year the FCC passed new rules allowing limited use of ultrawideband devices.

MESH NETWORKS. This approach relies on cognitive radios to intelligently adapt networks, depending on how many people are onboard. As more users join in one area, their gear would cooperatively pass along signals to cut congestion.



RADIO-ON-A-CHIP. Intel just unveiled the ability to make full radios—from antennas to amplifiers—out of the same silicon wafers used for microchips. Intel hopes to have a radio in every chip it makes in five years.

—*S.W.*

(It had filed for bankruptcy protection, and the company suc cessfully sued the FCC to block the resale; this prime slice c spectrum sits entirely fallow as a result.)

The cell industry has since sobered up, but the artificia shortage persists. Prices pose an insurmountable barrier t wireless crusaders like Kevin Negus and the Tri-County Tele phone cooperative. Their budget for superfast wireless Interne access service could never accommodate a multimillion-dolla FCC license. "It's terribly inefficient and grossly unfair to rur America," Negus laments.

One way to free up more spectrum is to dispense with th notion that licenses must grant exclusive rights at every minut of the day. Piggybacking on someone else's spectrum when it idle for a minute or an hour could vastly increase the supply c airwaves and send prices plummeting. Vanu Bose, the softwa radio pioneer, envisions a time when devices sense congestio and bid for the right to use other airwaves from minute t minute. The FCC spectrum policy task force is pushing a simila vision in which airwaves now left idle much of the day may b traded to other users. It also wants to allow smart radios to us bits of spectrum in ways that won't cause traffic jams.

While privatization picks up momentum, another wing c the reform movement wants to take unused spectrum an throw it open to public use. They point to Wi-Fi as evidence c what happens when the exorbitant price of air and incessa regulatory delays are removed. Wi-Fi can blast an astoundir 11 megabits a second, ten times as fast as a cable modem, for range of 300 feet—a limit imposed by the FCC, not by the tech nology itself. Business and consumers will install 7 million W Fi "access points" this year. Microsoft runs 3,400 Wi-Fi statio worldwide, linking more than 20,000 of its workers to the ne work. FedEx uses Wi-Fi it to track packages. Many college including Dartmouth, Carnegie Mellon and the University c Minnesota blanket their campuses with Wi-Fi.

But Wi-Fi must share its sliver of spectrum with everythi from microwave ovens to baby monitors to cordless phone and as more users pile in to share this public space, "it w stomp all over your network," says Pierre DeVries, a produ

**"IF YOUR WIRELESS NETWORK STOPS A RADAR FROM WORKING, WHAT HAPPENS IN A WAR? THE ARMY CAN'T ASK ENEMIES TO TURN THEIR NETWORK OFF."**

The early 1990s saw the first glimmering of a market in spectrum as Congress auctioned off licenses for just over 100 megahertz to the cell phone industry. In many ways the auctions were a huge success. The slivers of prime bandwidth that were sold off are used hyperefficiently. But the auctions also saddled companies with huge debts and addicted Congress to milking its newfound "free" source of spending money.

Bidders contributed to the problem; fights over the specks of spectrum led to a speculative frenzy. In 1999 blocks of spectrum 10 megahertz wide—or 0.3% of the total prime spectrum—that had originally been sold to newcomer NextWave were reauctioned by the FCC for $17 billion after the company foundered.

development director at Microsoft. Economists call this tl "tragedy of the commons." David Reed, formerly the top tec nologist at Lotus Development, and other scientists argue th new technology will overcome overcrowding. Others veh mently disagree. But almost everyone—from Silicon Valley the FCC to spectrum economists—agrees that the current sy tem is a disastrous waste. Everyone, that is, except the lucky sou that Congress long ago endowed with free spectrum.

And that's what make the spectrum rebels' blood boil. "You g all this fuss and noise about there not being enough spectrum says Chris Gilbert, chief executive of a Silicon Valley startup call IPWireless. "That's rubbish. It's just in the wrong hands."

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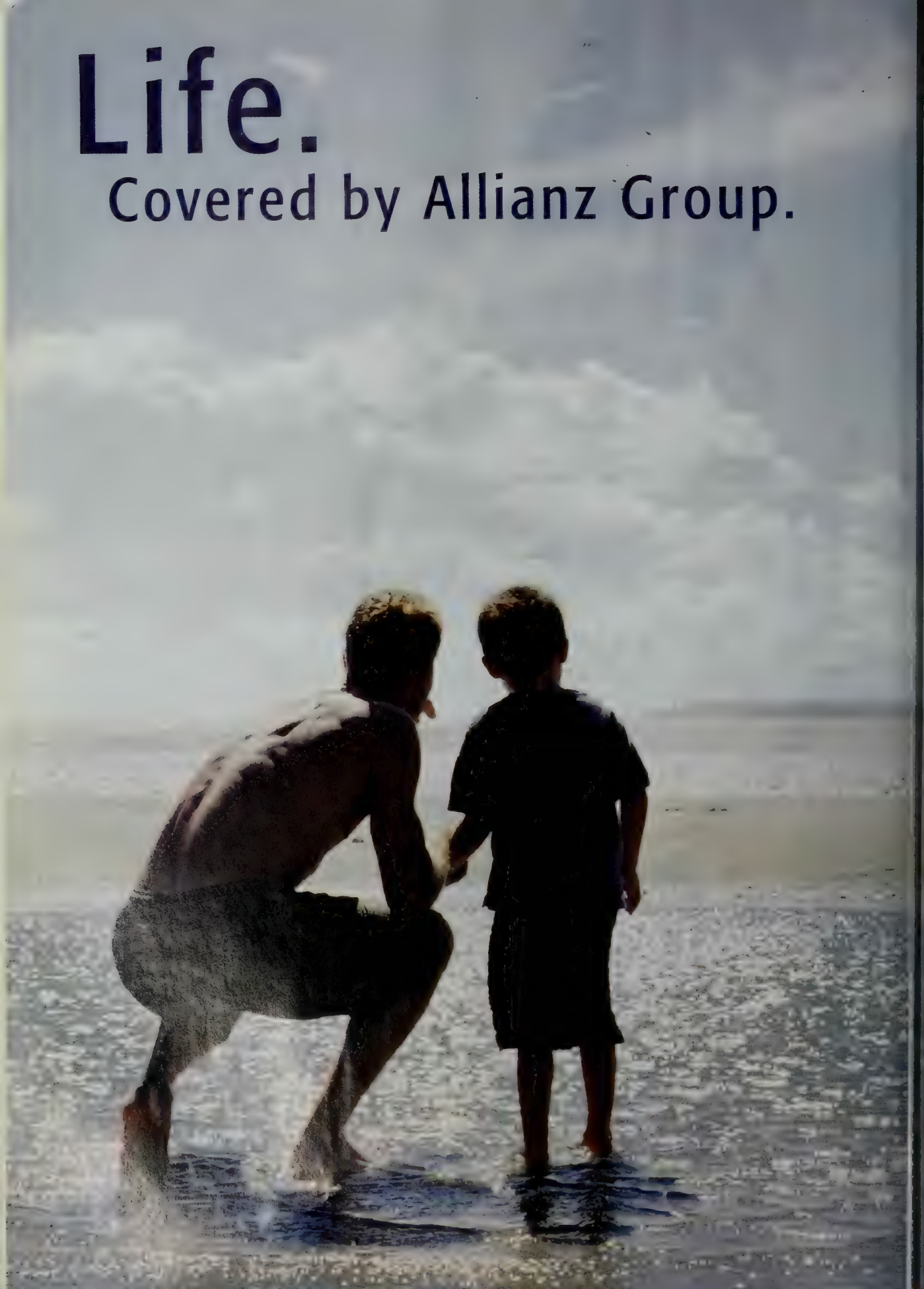

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# Gasoline and the Grid

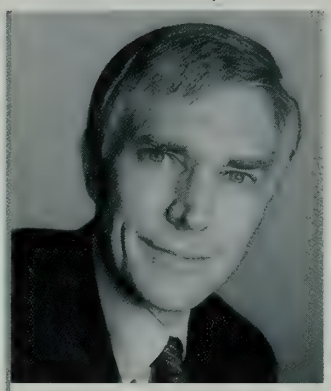
THE ONLY PLACE MOST ORDINARY AMERICANS SEE their energy up close is at the gas pump, and when "energy crisis" comes to mind they reach back to the Arab oil embargo of 1973. California had a recent electricity crisis, but everyone knows that was about bungled politics and crooked trading, not about fuel supplies or technology. This is probably why energy still means oil in most casual public discourse, and oil means Middle East.

Oil, however, isn't what it used to be. About 60% of the fuel we use today isn't oil—it's coal, uranium, natural gas and hydroelectric. About 60% of our GDP now comes from industries and services that use electricity as their front-end fuel. Some 60% of all new capital spending—what's left of it—is on information-technology equipment, all of it powered by electricity. All the fastest-growing sectors of the economy over the past decade—information technology and telecom, most notably—depend entirely on electricity for their fuel. And in the U.S., at least, almost no electricity is generated with oil.

**Instead of trying to suppress demand for energy, the experts in Washington should be promoting the substitution of electricity for oil.**

Electric power plants now account for about 40% of our total energy consumption, compared with (roughly) 30% each for transportation and heating. And electricity is progressively eating its way into those two smaller sectors. Lasers, microwaves and other forms of electrically generated power are now superseding conventional furnaces, ovens, dryers and welders—to heat air, water, foods and chemicals; to cure paints and glues; to fuse steel; to weld ships. Finely tuned, all-electric radiant ovens and beams work far better than most conventional ovens; a heat pump can deliver 2 Btu of warmth for 1 Btu of input. High-intensity light and other forms of well-tuned electrically generated radiation are now on track to become as important in our energy economy as the automobile.

The automobile itself is going electric, too, though in quite different ways. A steadily rising fraction of the power produced under the hood of a car is being used to generate electricity, because electrical modules are progressively displacing components driven by belts, pulleys, gears and shafts. Over the course of the next decade a 42-volt power system will replace



the existing 14-volt wiring i all cars. Steering, brakes, sus pension, fans, pumps an valves will go electric; in th end, the wheels will be drive electrically too. Batteries, hy drogen, fuel cells and environ mental mandates have nothin to do with this transition; elec tric drives are taking over be cause the electric drive trai delivers better performance lower cost and less weight.

The electrification of the automobile does, however, set th stage for direct energy handoffs between the car and the gric Green visionaries hope that hydrogen-powered fuel cells i cars will displace electricity from the grid—you'd run you toaster off a generating plant in your minivan. But the mor likely prospect, in the long term, is grid power flowing in th opposite direction. An electric drive train will promote th development of more and bigger onboard batteries. They, i turn, will spawn new plugs, to permit opportunistic rechargin from the grid, overnight in the garage and during the day i the workplace parking lot. The gas tank and combustio engine won't disappear, but grid power will (in effect) begi topping off the tank in between all the short trips that accour for so many of the miles we drive, and an even larger share c the fuel our cars burn.

If hydrogen does somehow emerge as a transportation fu of choice, that too will eventually lead supplies back to the gric which will provide the power needed to extract hydrogen fror water. Hydrogen can't really be viewed as a fuel at all; it is a sto age system, and what it will most likely store, in the end, is elec trical energy from the grid. The greens hope it will be wind c solar electricity. Coal and nuclear electricity are a more likel prospect. In any event, it won't be electricity generated from oi The fuels we use to generate electricity remain cheap and abur dant. And over the long term, the price of electricity keep falling, because so much of its cost lies in power-plant hardwar which keeps improving.

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Forbes.com | Peter Huber, a Manhattan Institute senior fellow, is the author of *Hard Green: Saving the Environment fr the Environmentalists* and the *Digital Power Report*. Visit his home page at www.forbes.com/huber.

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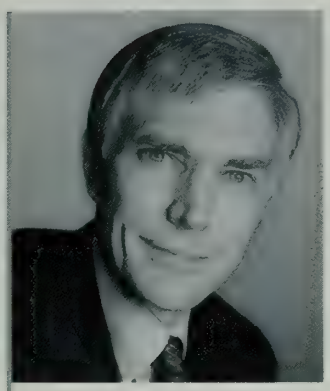

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If hydrogen does somehow emerge as a transportation fuel of choice, that too will eventually lead supplies back to the grid, which will provide the power needed to extract hydrogen from water. Hydrogen can't really be viewed as a fuel at all; it is a storage system, and what it will most likely store, in the end, is electrical energy from the grid. The greens hope it will be wind or solar electricity. Coal and nuclear electricity are a more likely prospect. In any event, it won't be electricity generated from oil. The fuels we use to generate electricity remain cheap and abundant. And over the long term, the price of electricity keeps falling, because so much of its cost lies in power-plant hardware, which keeps improving.

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Our annual report on America's biggest private companies ranks 257 closely held firms with revenues of at least $1 billion.

# Going Against The Grain

For 137 years Cargill has stuck to the disciplined, discreet ways that have made it the world's largest and most successful private company. Now Chief Executive Warren Staley insists he must tear it apart to keep it together.

BY NEIL WEINBERG WITH BRANDON COPPLE

DOWN A TWO-LANE HIGHWAY THAT WINDS THROUGH OAKS AND evergreens 25 miles west of Minneapolis, a secluded access road turns off to the south and is marked only by a small sign: "Cargill Lake Office." There near the shores of Lake Minnetonka, amid the sedate elegance of an antique French-style mansion, Warren Staley plots a revolution at the most dominating—and obsessively private—company on the planet.

On the face of it Cargill looks like the last business in need of

MICHAEL L. ABRAMSON FOR FORBES

President Greg Page must get 90 business units acting like one.

a shakeup. Earnings more than doubled last year. At $50 billion-plus in annual sales, Cargill is twice the size of its closest rival, Archer Daniels Midland, and bigger than Procter & Gamble or AOL Time Warner or Merrill Lynch. In sales Cargill is the 19th-largest company in America. Its 97,000 employees run more than a thousand production sites and operate out of 59 countries. They feed the world's herds and fertilize its crops. They store the harvest, process it and transport it around the globe. They finance and hedge the risk.

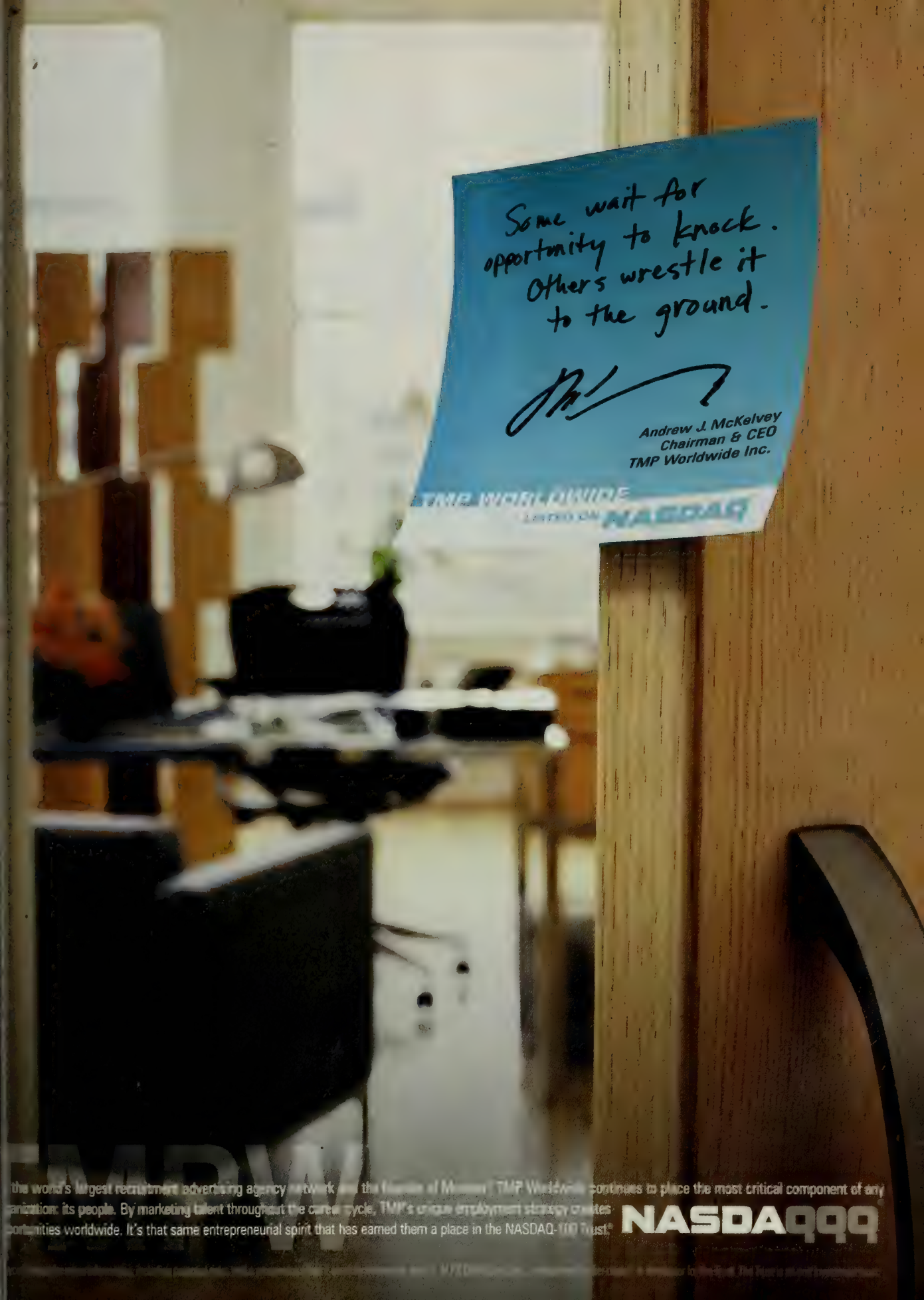
Cargill, or farmers working for it, raise 17% of the world's turkeys. In the U.S. it controls 22% of beef production and 25% of grain and oilseed exports. Its vast financial trading arm is a leading commodity broker and a heavyweight in sovereign debt, having reportedly controlled one-quarter of Russia's bond market. Is this behemoth too damned big for its own good? Is it too big for the good of the country?

Such suspicions ru deep because Cargill goes t such lengths to keep its pro file low. Some foreign out posts bear no compan shingle. Its annual repor contains no financial table Discretion is so deepl woven into the compan that even former Cargillite shy away from public com ments about their ol employer—compliment included. Cargill has bee incomparably adept a growing without having t go public and making all th compromises that woul entail.

"I'd hate to have t manage this company wo ried we'll miss an earning forecast by a penny a shar and have 40% clipped fror our value," says Staley. "It a great advantage being pr vate, with shareholders wh understand agriculture cyclical, returns are lum py and not every risk wi go our way." C. Dani Clemente, a Virginia lawye who is a Cargill famil trustee, says the company a paragon of how to stay ou of the public equity marke for generations. "Cargi should be the Harvar Business School model fo how to stay private," he says.

Cargill, founded in 1865 by William and Samuel Cargil sons of a Scottish sea captain, started out as a lone grain-storag flat house in a frontier town in Iowa. Over the decades Carg grew like bamboo, silently snaking its roots below ground on to shoot up in unexpected places and redraw the landscap Sprouting from the grain trade, it spread its tendrils into farm ing, milling, flavoring, a fleeting stab at energy trading and bizarre global mishmash of seemingly unrelated ventures, fro steelmaking to viatical financing to ownership of a casino in L Vegas. Cargill let these businesses operate separately ar autonomously, each one unaware of (or unconcerned wit goings-on elsewhere in the empire.

No more. Staley, 60, chief executive since 1999 and five yea from company-mandated retirement, wants to reshape Carg into a more sensible giant with a sharper focus on its origins-


Some wait for opportunity to knock. Others wrestle it to the ground.
Andrew J. McKelvey
Chairman & CEO
TMP Worldwide Inc.
TMP WORLDWIDE
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the world's largest recruitment advertising agency network and the founder of Monster, TMP Worldwide continues to place the most critical component of any
anization: its people. By marketing talent throughout the career cycle, TMP's unique employment strategy creates
portunities worldwide. It's that same entrepreneurial spirit that has earned them a place in the NASDAQ-100 Trust.
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1865

**William W. Cargill** begins operating grain-storage flat house in Conover, Iowa

1890

Expands to 71 grain elevators, 2 flour mills

1909

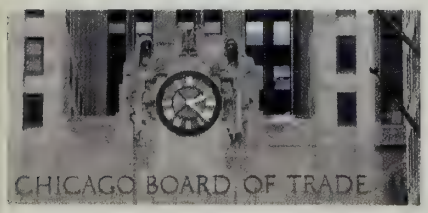
Willliam's son-in-law **John MacMillan Sr.** takes over after rescuing firm from near-bankruptcy

1928-29

Sets up first foreign operations in Canada, Italy

1938

Barred from futures trading at Chicago Board of Trade

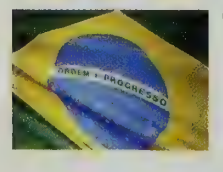


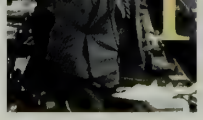
1942-45

Becomes Navy shipbuilder, enters soy-processing business

1953

Loads first bulk corn shipment in Brazil's interior



1955

Sets up financial unit in Geneva

1968-69

Enters Korea and Taiwan

1974

Gets into steelmaking, cattle feedlot businesses

1993

Cargill, MacMillan families sell 17% of firm to employees

1999

Launches drive to develop high-value-added foods

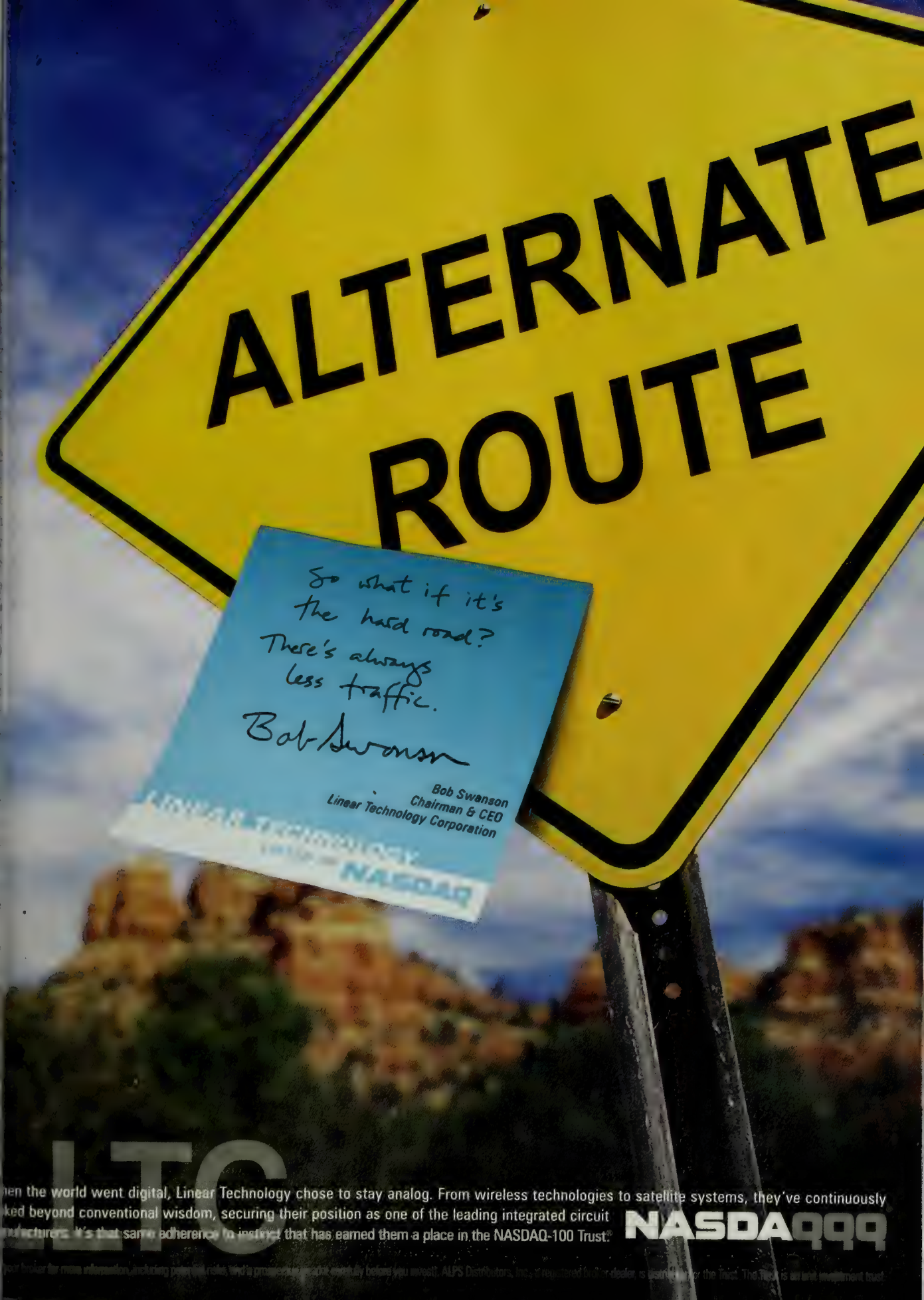
the food business—and new cooperatio
"To grow our opportunities we have t
shrink our sandbox," Staley says in a ra
interview. "That means telling our bus
nesses, 'We won't starve you, but we ma
shoot you.'"

That is a stunning threat in a firr
where lifetime employment is the norn
especially in the highest echelon, an
where employees boast that their bloo
runs Cargill green. Staley is shaking th
place up. He has bumped dozens of mar
agers. He is drawing new talent via acqu
sitions and new hires. "Making sure th
right people are on the bus and in th
right seats" is how he puts it.

In three years Staley has jettisoned $
billion in businesses, from steel-pipe mak
ing to coffee trading. He has spent a fe
billion dollars buying rivals in key ma
kets, building a position as the nation
biggest flour miller and number-tw
turkey producer, and as the largest grai
merchant and among the biggest produ
ers of vegetable starches in the world. St
ley's shopping spree will continue for
while, bankrolled by more asset sales, pe
haps $700 million in cash and $2.3 billic
in annual cash flow from operatior
(roughly, net income plus depreciatio
and working capital changes). "We'
keeping things bubbling," he says. "Fortu
nately, cash is king, so it's a very interestir
time for people like us."

He calls his new initiative Strategic I
tent. Bland though it sounds, it is a daun
ing departure—and a perilous one. Th
problem is that Cargill's core food bus
nesses, accounting for three-quarters
revenue, have always had gossamer pro
margins and cyclical ups and downs. La
year, though Cargill ranked 19th in re
enue for U.S. companies, it didn't ma
the top 100 for earnings (though they h
more than doubled to $827 million).

So Staley, sounding like a tech exec
tive, wants to flee commoditization f
higher-profit services and new produc
foodmakers can't get anywhere else. H
wants to climb from the low-marg
ghetto of beans, meals and oils and in
pricey new ingredients and "solution
for farmers, foodmakers and restaura


ALTERNATE
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So what if it's
the hard road?
There's always
less traffic.
Bob Swanson
Bob Swanson
Chairman & CEO
Linear Technology Corporation
LINEAR TECHNOLOGY
NASDAQ
LTC
hen the world went digital, Linear Technology chose to stay analog. From wireless technologies to satellite systems, they've continuously
ked beyond conventional wisdom, securing their position as one of the leading integrated circuit
nufacturers. It's that same adherence to instinct that has earned them a place in the NASDAQ-100 Trust.®
NASDAQqqq

chains. He is pushing into everything from financial hedges for farmers and factories to corn-based plastics and healthful soy fillers, which sell for dollars rather than pennies a pound.

For Staley, now is the time to get Cargill out of the commodity rut—or dig his own grave trying. He joined up at age 33 and never left. Early on the job he was struck by the urgency it takes to succeed in the food business. Standing in a futures pit at the Chicago Board of Trade during talk of a corn blight, he was knocked to the floor by a trader's furious gesticulations and arose with a welt on his forehead.

He is the seventh chief in the company's long history. The original Cargill brothers ran it for more than a quarter century; William's son, Will Cargill, nearly bankrupted the firm on Montana land deals in the first decade of the 20th century. Will's brother-in-law, John MacMillan Sr., intervened with bankers to prevent foreclosure. MacMillan received management control in 1909 and the biggest ownership stake. His descendants' majority share is double the Cargills', in a firm worth perhaps $11 billion.

**By the Numbers**

**Low-profile Cargill is larger than Procter & Gamble and Merrill Lynch.**

**$51 billion** Cargill's annual sales.

**630 million** Cargill's grain storage capacity, in bushels.

**25%** Portion of U.S. grain and oilseed exports Cargill handles.

**100** Number of countries where Cargill does business.

In 1934 John Sr. handed the family business to his son, John MacMillan Jr., a World War I artillery officer, who expanded so aggressively during the Dust Bowl years of the 1930s that Cargill was banned from the Chicago Board of Trade for trying to corner the grain market. He continued expanding anyway, and the company boomed during World War II on storing and transporting grain and building ships for the Navy.

John Jr. reigned until 1960, when Erwin Kelm became the first nonfamily chief executive. Kelm steered Cargill downstream, from crop-handling into milling, starches and syrups. The bigger Cargill got, the more it pressed its intelligence edge. Three decades before most people began using e-mail, Cargill used a telex-based system so that the lowliest trainee could zip sensitive weather, crop or cargo information to senior officers in seconds. "Cargill has the best market intelligence in the world through its commodities trading, processing, freight, shipping and futures businesses," says Marvin Hayenga, a professor at Iowa State University. "When it sees three commodity ships leaving Argentina, Cargill knows what that says about pricing 2,000 metric tons somewhere else."

The 1970s brought the Soviets into the grain markets with unheard-of demand, and Cargill thrived. In 1976, as revenue approached the $30 billion mark, Whitney MacMillan—th nephew of John Jr.—took over from Kelm. The compan became a prime target when the government went after the bi grain exporters for allegedly manipulating the market. emerged largely unscathed.

For many current senior managers, a rite of passage at tha time involved starting out at rural grain elevators with a phon a list of farmers' numbers and a mandate to feed the company silos and processing plants. It was a solid primer for learnin Cargill's most fundamental business and how the company pro moted those who made the most of opportunity. Rene Haugerud sat in Cargill's Kansas City office in 1983 when sh picked up a call from a farm co-op looking to sell three barges sunflower seeds. "Who handles sunnies?" she asked the tradin manager. "Nobody," came the reply. She was told to "check out." So she signed a contract to buy the seeds and haggled fo rail transport and storage at a Houston elevator and lined u customers in Mexico and among birdseed makers. Cargi earned $200,000 in the business that first year. Thus wa Cargill's sunflower business born—and its leade anointed. Haugerud went on to promotions and pos ings around the world.

"Cargill's secret is hiring good people and givin them a real challenge, so they'll rise to it," says Brewste Kneen, author of the recently published second editio of *Invisible Giant: Cargill and Its Transnational Strat gies*. One trader in his mid-20s was handed $30 millio and told to build a bond portfolio from scratch. He di

As Cargill spread its seedlings around the globe, typically started small and expanded quietly. Aft entering Thailand, it moved from selling seeds in th 1990s to feed, rice, chickens, rubber smokehouses an finance.

But building a global presence was costly; the compan typically plowed upwards of 80% of earnings back into th business. By the early 1990s young members of the Cargill an MacMillan clans were growing restless owning compan shares that had no liquid market and mediocre dividend Whitney MacMillan countered calls for a public offerin with an employee stock ownership plan. In 1993 the compa reportedly paid $730 million in cash to 72 Cargills an MacMillans in exchange for 17% of the firm, using that sta to begin the employee stock plan. Today, after retirements, t employees' share is down to 12%. Cargill's board was al remade to include just six relatives alongside six independen and five managers.

Whitney MacMillan yielded to Ernest Micek as chief exec tive in August 1995, and Micek then presided over a heap trouble. Cargill's financial unit lost hundreds of millions of do lars in the 1998 emerging market financial crisis. The commo ties and ingredients businesses that provide 75% of Cargil total revenue were hurt by a global glut. Revenue fell by doubl digit percentages two years in a row. In early 1999 Cargill, wi $4 billion in debt, was stung when bond agencies cut its rating notch to A+. A few months later Micek said he would step dov

Why try to change the world?
A better question is, "Why not?"
William A. Haseltine, Ph.D.
Chairman & CEO
Human Genome Sciences, Inc.
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st if the body could heal itself? By developing methods to treat and cure disease using the body's own genetic code, Human Genome Sciences is shaping the future medicine. It's that same commitment to improving lives that has earned them a place in the NASDAQ-100 Trust.
NASDAQqqq

a year earlier than planned. Warren Staley took over and has been charging ahead, six-shooters blazing, ever since.

Cargill, already the world's dominant grain seller, bought the number two player in 1999, just when grain prices were at a ten-year low. (Classic Cargill: It bets big when the chips are really cheap.) Last year it paid $580 million for the Purina international and Chow brands. It also bought Rocco Enterprises for an undisclosed sum, becoming the nation's second-largest turkey processor. Early this year Cargill overtook ADM as the leader in flour milling by merging its business with a rival. In April Cargill completed the largest acquisition in its history, buying Cerestar, a French ingredient maker, for $1.1 billion. The deal made it one of the world's largest producers of vegetab starches and increased its scientific staff by half.

Cargill and three rivals control 81% of the U.S. beef marke with two other competitors, it holds just as high a share of co exports. Now through its AgHorizons program, it seeks to pr vide farmers with everything from fertilizer to financial service Staley recounts a lunch with farmers in the Nebraska town Motala a year ago. "When I asked what their three biggest co cerns were, they said: 'Manage price risk, manage price risk a manage price risk,'" he says. "'Then don't screw me at harve time,'" by making them wait around to unload.

Some farmers, however, fear Cargill itself may become the biggest problem *(see box, p. 168)*. "Consolidation is forci farmers to abandon being entrepreneurs and become low-wa contractees of big corporations," says Thomas Buis of t National Farmers Union. With populist sentiments like that o boiling up, there's no telling when restrictive legislation mig surface or the antitrust cops come knocking.

For Staley, the way to outgrow such problems is to mo beyond the commodity end of the business. After all, ConAg Foods' 19% return on equity is almost double Cargill's. make that point his executives paraded around a Februa meeting in T shirts stating "I am not a commodity" and "I a not a soybean." The real payoff will come from selling compl solutions to fellow giants, like Nestlé, Wal-Mart and McDo ald's. No easy task, that one. "Purchasing managers don't wa to be solutionized. That means we have to start with sm wins," says Cargill President Gregory Page. In plainer Englis An industrial buyer would rather order a hunk of meat th cooked hamburger patties.

Page, a 28-year Cargill veteran and, at 51, Staley's heir appa ent, aims to cook up some products too enticing to pass up. S products, a Cargill specialty, are of particular interest, with ret sales expected to grow 17% this year, marking a seventh-conse utive year of double-digit gain. The market already attra major players, with Kellogg having bought Kashi and Worthin ton Foods and Kraft acquiring Boca Burger.

The problem is that many Americans and Europeans det soy's taste. For now that means disguising it in familiar produ like cappuccino and health food bars that, though chocolat coated, have the requisite 6.25 grams of soy per serving requir to make healthful cardio-claims in the U.S. Cargill says it h about 50 more food products in the pipeline.

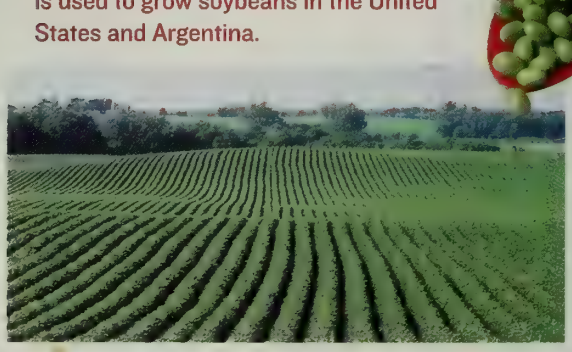
Des Moines dairy Anderson Erickson now makes a new s yogurt from a soy protein isolate that Cargill touts for its blan ness, and manufactures at a Sidney, Ohio factory opened l month. French Meadow, a Minnesota bakery, uses Cargill's s flour to bake breads for men (its sterol content has been tout as a natural way to prevent heart disease) and for women (pla hormones limit the effects of menopause).

It is small beans for now, but with the likes of PepsiCo ai ing to add health claims to half of the products in its Frito-L division, the spoils could be huge. Robert Parmelee, Cargil president of food system design, expects to reap an extra $ billion in annual sales within six years. He adds, with so

## Food Chain

**Cargill is a big presence from farm to table, but few end-customers have even a taste of what it does.**

Cargill phosphate fertilizer from Florida is used to grow soybeans in the United States and Argentina.



These beans are then processed into meal and oil, and the meal is shipped to Thailand to feed chickens.

The chickens are processed, cooked and packaged . . . so they can be sent to supermarkets in Japan and Europe.

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hyperbole, that profit margins will be "orders of magnitude" greater than for Cargill's traditional products.

But Cargill must overcome internal strife to pull it off. In negotiations over an exclusive ingredient-supply contract with Rich Products, the $1.7 billion (revenues) Buffalo, N.Y. maker of Smokehouse Bar-B-Q sauce, baked goods and Italian foods, the most rancorous negotiations took place inside Cargill. Managers for products like chocolate, corn sweeteners and flour, accustomed to being rated on unit profitability, balked at sharing costs and staff. That forced Vice President John Geisler to assure managers he would "keep them whole" during performance reviews.

"In the old Cargill, you defended your P&L no matter what, and if that meant blood on the street, so be it," he says. "This is not a camel built for collaboration."

The trick for management is getting people to view themselves as more than commodity pitchmen. Cargill has replaced 70% of the managers in its North American malt business for failing to adjust to customer requests, like specialty products. At about 80 grain-handling facilities, 40% of managers have been replaced for failing to transform themselves from mere fertilizer salesmen into forward-thinking AgHorizon consultants who hand out advice on crop rotation and risk management.

For a Honduran fresh fish client, Cargill arranged joint visits to U.S. retailers and helped it win two new contracts. In Brazil the manager of a flour mill won long-term deals by guaranteeing one customer uniform quality throughout the year, so its crackers would always fit in their wrappers. In the process the mill went from moneylosing to moneymaking.

For another customer, Cargill worked out a hedge against price rises of more than 10%. In the U.S. sales people used to pitch Cargill's Wilbur Chocolate unit as a sweets vendor; now they sa they are in the business of "modifying fats, flavors a bulking agents." "That, microcosm, is what we want We're more than a limited product," says Page, the presi dent.

When Cargill can't dominate a business on its own, teams up with another titan. A year ago Cargill began opera ing a $300 million plant with Dow Chemical in Blair, Nebr. turns corn glucose from an adjacent Cargill plant into rec clable plastic fiber for use in comforters and other products. September it teamed its vast meat processing operations wi the marketing and distribution skills of Hormel to begin deli ering prepackaged beef and pork to supermarket chain "Instead of earning 1% on a low-margin commodity, Cargil margin on these differentiated products is likely to be 3% 5%," says Hayenga, who teaches agricultural economics Iowa State.

Like Staley's other new programs, the payoff down on t farm is probably years away. He insists that is no cause for alar "The more complex the things we're doing for our custome the more they're willing to pay us," he says. "That makes wh we're doing very interesting." Especially when you have hung shareholders to please.

## Turkey Shoot

On Thanksgiving Day the irony may be too much to bear in the south Texas farmhouse of Kenneth and Gail Schauer. As they sit down to turkey dinner, the Schauers will be just across the barnyard from 17,000 living, unsold turkeys—turkeys that they say Cargill had promised to buy before it backed out and left them with no other buyer for their buxom toms.

In a lawsuit they filed in July with 43 other Gonzales County, Tex. turkey farmers, the Schauers claim Cargill contracted to buy their turkeys, even encouraged the farmers to expand their production. "They told us, 'We've got to have the production down here. We need you,'" says Schauer. On the strength of that promise, the Schauers say, their banker loaned them $260,000 to build two 30,000-square-foot turkey houses.

But this spring turkey prices fell 15% from a year earlier—a devastating blow to any meat processor's already thin margins, and one usually battled by slashing production. Cargill did exactly that, and in May it told the Gonzales County farmers it would not renew their contracts. That left the Schauers with thousands of fattened birds and no way to service the $160,000 debt still outstanding on their turkey houses.

The farmers say Cargill planned to abandon them all along. They claim the company induced them to expand production—then refused to buy their turkeys as part of a scheme to drive the farmers out of business. Eliminating their farms would reduce the supply of turkey and drive up wholesale prices for Cargill's meat.

That, the farmers claim, violates state antitrust law. They say Cargill became a Texas turkey monopoly with its 1998 acquisition of Waco turkey processor Plantation Foods.

The Schauers' suit set off a summer media storm in south Texas, but Cargill stands by its decision. Says Warren Staley: "I know what we've done is within the regulations, within the laws and consistent with what we told the farmers. Ninety-nine percent of what you read in the press is inaccurate." Cargill denies that it ever induced the farmers to expand production.

Even if that proves true, Cargill probably hasn't seen the last of lawsuits like this one. As farm families like the Schauers and corporations like Cargill wrestle with the shifting realities of modern agriculture, the feathers are bound to fly. —*B.C.*

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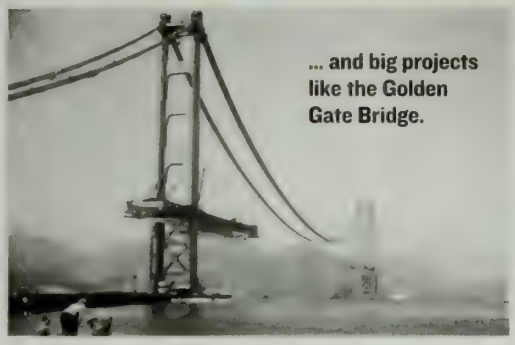
# Master Planner

## In the ever-consolidating home building business John Shea and his cousins have kept their firm private and independent.

Home sweet home: The Sheas built their company on upscale homes ...

BY RISHAWN BIDDLE

John Shea, 76, the soft-spoken, bespectacled chairman of the J.F. Shea Co., and his two cousins, Peter and Edmund, claim little has changed at the Walnut, Calif. outfit since its founding. A bit of an understatement. Their grandfather started the company in 1881 as a manufacturer of plumbing fixtures. It has since migrated through the dam, tunnel and subway construction businesses and is now a home builder.



... and big projects like the Golden Gate Bridge.

In the 1930s the company helped build the Hoover and Grand Coulee dams, as well as the Golden Gate Bridge. In the 1960s it worked on San Francisco's Bay Area Rapid Transit system. But the Shea family didn't see much future in such cost-plus contracts. So in 1968 the company hooked up with two former home building executives to develop tract housing and mobile home parks.

Shea's foray into home building was tough going at first. One project in Los Angeles' San Fernando Valley was nearly destroyed by the 1971 Sylmar earthquake. The firm's first big score came in 1979, when it began work on a 900-acre development in the resort town of Laguna Niguel, Calif. Shea then picked up an adjacent parcel and built that out, as well.

Home building is a very fragmented business, with thousands of small players who come and go. But among the billion-dollar giants in the sector it is rare to see a family-owned company like Shea. Since 1992, reports Bank of America's securities operation, 100 privately owned builders have been acquired, mostly by the big public outfits. The biggest publicly traded builders accounted for 17% of all homes built in the U.S. last year, versus just 9% a decade ago. "Most businesses like ours can barely survive their feuding within, much less changes without," admits John Shea, while nibbling on a tuna sandwich in the company's boardroom.

Last year Shea boosted unit home sales by 13%, to 5,600, while revenues rose 5.6%, to $1.97 billion. Shea has managed to stick around by becoming a fully integrated real estate developer. Among its properties: the 22,000-acre Highlands Ranch in Denver, California's Mission Viejo and the 7,100-acre Vistancia in Peoria, Ariz., near Phoenix.

Although Shea still develops small parcels of land on which it can fit a handful of new homes, its forte is thousand-acre plots, for which it develops a master plan. It then recovers a portion of its cash outlay by selling some land to other builders and developers. Shea keeps the rest of the acreage, dividing it among home lots, its commercial real estate arm and its Trilogy division, which develops ritzy retirement communities complete with championship golf courses.

Two years ago Shea was the lead bidder in a bankruptcy auction for the 7,100 acres that became Vistancia. In August it beat out 50 other firms to partner with the Worldwide Church of God on a 48-acre project in Pasadena, Calif. Says John Shea: "You have to be opportunistic. Great land equals great projects."

The company also brings in partners to split the costs of land acquisitions and development. It teamed up with Morgan Stanley to buy and develop 300 acres throughout northern and southern California in 1996. Recently it put together a joint venture with home building rivals Centex and Lennar to develop Rivermark, a 1,850-home and shopping mall community on 152 acres in Santa Clara, Calif.

Some of Shea's growth has come from acquisitions. Its most important purchase came in 1997, when it picked up the Mission Viejo Co. and, with it, prime land parcels including the massive Highlands Ranch development.

Can Shea stay in the family? Only two of John, Peter and Edmund's 17 children are in the business. One of John's sons runs a small family-owned outfit; another son and two of his cousins run a home building company in Charlotte, N.C.

The heir presumptive is Peter Shea Jr., 35, who got his start as a laborer in Shea's Redding, Calif. rock and gravel quarry. He's now the chief operating officer. Says John: "Peter's learned to do business the way I did, so everything's in good hands." F

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# America's Private Giants

Thanks to the worst bear market in decades, our list of U.S.-headquartered private companies with annual revenues over $1 billion has only seven new members that went private over the last 12 months.

One newcomer is Swift & Co., the $7.73 billion (sales) beef and pork processor whose roots go back to 1875. Swift, which went private in September, is still 46% owned by Conagra, a public company. Polaroid *(see p. 196)* also joins our list, but its former shareholders were wiped out when the company went bankrupt.

Among the few private companies from last year's listing that went public over the last 12 months is Dick's Sporting Goods, which had an offering in October. And just a handful of companies on our list are currently preparing to go public. Examples: Seagate Technology and Noveon, a former BFGoodrich subsidiary.

A few notes on methodology: For companies such as Cox Enterprises, which have both publ and private subsidiaries, we only count th revenues of the private operations in ou tabulation of this list. To be considered private, company must be closely held—with either to few partners or shareholders to force th company to file with the Securities and Exchang Commission, or with strict limitations on sha ownership.

Firms with fewer than 100 employees, non profits that do not pay income taxes, mutual cooperatives, auto dealers and companies that g more than 50% of their sales from real estate a excluded. We also dropped accounting firm such as KPMG International, whose primar executive offices are located in Europe. Startin this year, those companies will be listed by FORB GLOBAL, our sister publication.

For more on private companies, go www.forbes.com/private.

| Rank '02 | Rank '01 | Company / Business | Chief Executive | Headquarters | Revenues 2001 ($Mil) | Revenues Change (%) | Employe |
|---|---|---|---|---|---|---|---|
| 1 | 1 | **Cargill**<br>mkts & processes agricultural & industrial commodities | Warren R Staley | Minneapolis, MN | 50,826 | 2.9 | 97,000 |
| 2 | 2 | **Koch Industries**<br>chemicals, energy, environ tech, ranching, finl svcs | Charles Koch | Wichita, KS | 40,000e | -1.7 | 11,000 |
| 3 | 4 | **Mars**<br>candy, ice cream, pet food, rice; electronics | John F Mars | McLean, VA | 17,500e | 6.1 | 30,000 |
| 4 | 3 | **PricewaterhouseCoopers**<br>accounting, auditing, tax & consulting svcs | Samuel A DiPiazza Jr | New York, NY | 16,100e[2,5] | NA | 120,000 |
| 5 | 5 | **Publix Super Markets**<br>684 supermarkets in FL, GA, SC & AL | Charles H Jenkins Jr | Lakeland, FL | 15,370 | 5.5 | 126,000 |

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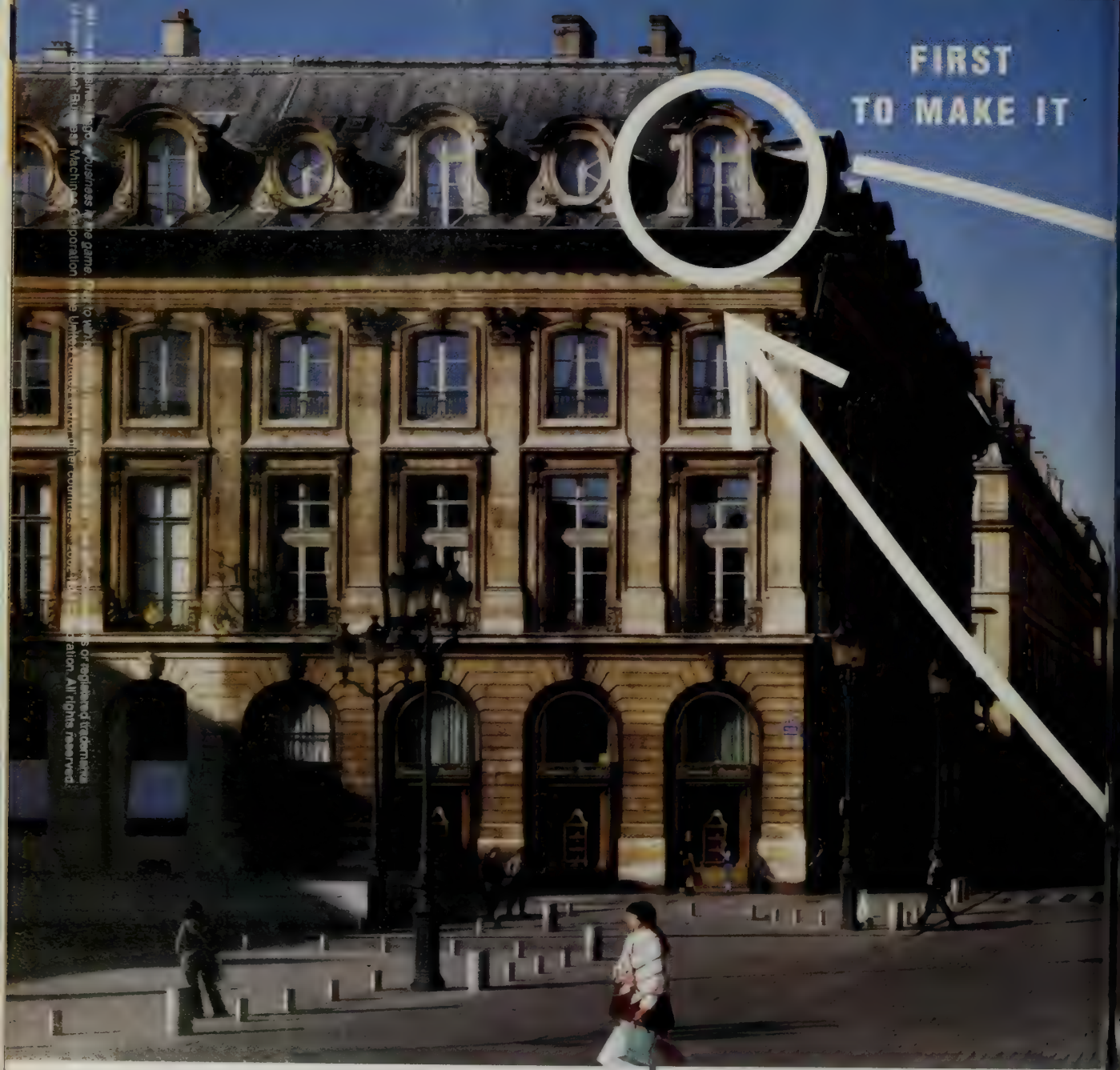


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| Rank '02 | Rank '01 | Company / Business | Chief Executive | Headquarters | Revenues 2001 ($mil) | Revenues Change (%) | Employees |
|---|---|---|---|---|---|---|---|
| 5 | 6 | **Bechtel** engineering, construction, project devel & mgmt | Riley P Bechtel | San Francisco, CA | 13,400 | -6.3 | 50,000 |
| 7 | 11 | **Meijer** general merchandise & grocery stores in Midwest | Hank Meijer[6] | Grand Rapids, MI | 10,600e | 6.0 | 85,000 |
| 8 | 10 | **Ernst & Young** accounting, auditing, tax & finl svcs | James S Turley | New York, NY | 10,100[3] | 2.5 | 110,000 |
| 9 | 13 | **HE Butt Grocery** food/drug stores; food processing; film processing | Charles C Butt | San Antonio, TX | 9,900[2] | 10.4 | 60,000 |
| 10 | 9 | **Fidelity Investments** mutual funds, brokerage, pension mgmt | Edward C Johnson 3rd | Boston, MA | 9,807 | -12.0 | 31,359 |
| 11 | 14 | **C&S Wholesale Grocers** wholesales food to supermarkets & military bases | Richard B Cohen | Brattleboro, VT | 9,700 | 14.1 | 7,500 |
| 12 | 15 | **Huntsman** produces chemicals, polymers | Peter R Huntsman | Salt Lake City, UT | 8,000e | -5.9 | 13,000 |

## 21 GRAYBAR ELECTRIC

# Building Up In the Downturn

Graybar, which was purchased by its employees at the beginning of the Great Depression in 1929 after being spun off from Western Electric in 1925, stocks 175,000 different electrical and telecommunications products. Its warehouses hold anything from basic wire, cable and transformers to local and wide area networking products made by companies like General Electric and Lucent Technologies. The company sells these items to 200,000 customers, mainly electrical contractors, but also industrial manufacturers and regional telcos like Verizon and SBC Communications.

Lately Graybar's business has been awful. After clocking a 15% average annual sales growth over the four years through 2000, Graybar's revenues dropped 8% to $4.8 billion in 2001, the first downturn since the 1991 recession. The first half of 2002 hasn't been much kinder—Graybar's sales are down 21% and net income has fallen 86% from the year-earlier period, to $1.9 million. Even employee-owned firms are not worker paradises: This one has shrunk its payroll during the downturn by an eighth, to 8,400 workers.

Despite the dismal state of capital spending in the telecom munications sector, Graybar boss Robert A. Reynolds Jr. is opt mistic that 2002 revenues will clear $4 billion. Graybar eve began increasing branch inve tories in October, hoping to get jump on the competition befo an anticipated turnaround.

The company is also spen ing $90 million to install a ne inventory tracking and billi system that should be in pla next year. And by encouragi equipment manufacturers to i plement a bar code syste Graybar hopes to offer enhanc tracking and management cap bilities similar to those found the retail industry.

Another improvement: Whe as 250 Graybar branches we previously responsible for th own inventory needs, now 14 gional warehouses carry hard-t find items, leaving the branch more room to store frequently p chased items.

In an industry with $73 b lion in revenues, St. Louis-based Graybar is the largest amo 4,200 competitors. Its biggest rivals are Wesco Distribution a Anixter, but as a group the three firms only account for 16% m ket share in a tough low-margin business.

Supply-chain logistics may sound like old news in other dustries, but in this business it could differentiate Graybar in otherwise crowded field. —*Tricia McGin*

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| Rank '02 | Rank '01 | Company / Business | Chief Executive | Headquarters | Revenues 2001 ($Mil) | Revenues Change (%) | Employees |
|---|---|---|---|---|---|---|---|
| 13 | 18 | **JM Family Enterprises** distributes Toyotas; automotive retail svcs | Pat Moran | Deerfield Beach, FL | 7,800 | 9.9 | 3,500 |
| 14 | ■ | **Swift & Co** processes beef & pork | John Simons | Greeley, CO | 7,733 | NA | 21,400 |
| 15 | 22 | **Enterprise Rent-A-Car** auto rental, fleet services, car sales | Andrew C Taylor | St Louis, MO | 6,500 | 3.2 | 50,000 |
| 16 | 19 | **Marmon Group** manufacturing & service companies | John D Nichols | Chicago, IL | 6,414 | -5.5 | 35,000 |
| 17 | 23 | **Science Applications Intl** tech r&d, systems integration, telecom & IT outsourcing | J Robert Beyster | San Diego, CA | 6,095 | 3.4 | 40,400 |
| 18 | 21 | **Seagate Technology** makes disk drives; data storage solutions | Stephen J Luczo | Scotts Valley, CA | 6,087 | -4.7 | 45,779 |
| 19 | 25 | **Menard** home improvement centers | John Menard Jr | Eau Claire, WI | 5,200e | 7.2 | 9,200 |
| 20 | 27 | **SC Johnson & Son** cleaning; home storage, insect cntrl & pers care prods | William D Perez | Racine, WI | 5,000[2] | 11.1 | 9,500 |
| 21 | 24 | **Graybar Electric** wholesales electrical, telecom & network equip | Robert A Reynolds Jr | St Louis, MO | 4,815 | -7.7 | 9,800 |
| 22 | 29 | **Giant Eagle** supermarkets in PA, OH, WV, MD; food wholesaling | David S Shapira | Pittsburgh, PA | 4,415[2] | -0.5 | 26,000 |
| 23 | 26 | **Levi Strauss & Co** Levi's, Dockers & Slates jeans & other apparel | Philip A Marineau | San Francisco, CA | 4,259 | -8.3 | 16,600 |
| 24 | 38 | **MBM** distributes food to restaurant chains | Jerry L Wordsworth | Rocky Mount, NC | 4,236 | 10.8 | 3,500 |
| 25 | 34 | **Cox Enterprises** newspapers, TV, broadband, radio; auto auctions | James C Kennedy | Atlanta, GA | 4,230e[4] | 7.8 | 52,900 |
| 26 | 30 | **Advance Publications** newspapers, magazines: Condé Nast | Samuel I Newhouse Jr | New York, NY | 4,185e | -4.9 | 22,785 |
| 27 | 41 | **Alticor** Amway household & personal-care prods | Doug DeVos | Ada, MI | 4,185e | 9.6 | 10,000 |
| 28 | 35 | **Hy-Vee** Hy-Vee Food supermarkets, Drug Town drugstores | Ronald D Pearson | West Des Moines, IA | 4,100[2] | 5.1 | 46,000 |
| 29 | 39 | **Guardian Industries** flat glass, fiberglass insulation, auto glass & trim | William M Davidson | Auburn Hills, MI | 4,000e | 5.3 | 19,000 |
| 30 | 48 | **Gulf States Toyota** independent distributor of Toyotas | Thomas N Hynes | Houston, TX | 3,900e | 9.2 | 3,000 |
| 31 | 37 | **Reyes Holding** food & beverage distributor; logistics; real estate | J Christopher Reyes[7] | Rosemont, IL | 3,900 | 10.4 | 3,877 |
| 32 | 31 | **Hallmark Cards** greeting cards; TV programs; art materials | Donald J Hall Jr | Kansas City, MO | 3,890e[4] | -8.1 | 19,600 |
| 33 | 28 | **Peter Kiewit Sons'** heavy construction; mining | Kenneth E Stinson | Omaha, NE | 3,871 | -13.0 | 16,000 |
| 34 | 33 | **InterTech Group** makes polymers & composites | Jerry Zucker | North Charleston, SC | 3,750e | -6.3 | 16,500 |
| 35 | 42 | **Southern Wine & Spirits** distributes alcoholic & nonalcoholic beverages | Harvey R Chaplin | Miami, FL | 3,750 | 7.1 | 5,680 |
| 36 | 44 | **Eby-Brown** distributes candy & other prods to convenience stores | Richard W Wake[8] | Naperville, IL | 3,670 | 7.9 | 2,100 |
| 37 | ■ | **Roundy's** distributes, retails & wholesales food products | Robert Mariano | Pewaukee, WI | 3,619[1] | 23.2 | 13,451 |

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| Rank '02 | Rank '01 | Company / Business | Chief Executive | Headquarters | Revenues 2001 ($mil) | Revenues Change (%) | Employees |
|---|---|---|---|---|---|---|---|
| 38 | 36 | **Milliken & Co** textiles & chemical products | Roger Milliken | Spartanburg, SC | 3,600e | -7.7 | 14,000 |
| 39 | 45 | **McKinsey & Co** international management consulting firm | Rajat Gupta | New York, NY | 3,336e | -1.9 | 13,000 |
| 40 | 32 | **ContiGroup Cos** poultry & pork production; cattle feeding; milling | Paul J Fribourg | New York, NY | 3,300 | -18.0 | 14,500 |
| 41 | 53 | **Raley's** Raley's Food & Drug stores; other stores | William J Coyne | West Sacramento, CA | 3,300 | 10.0 | 16,000 |
| 42 | 43 | **Hearst** publishing, broadcasting & entertainment | Victor F Ganzi | New York, NY | 3,270e[4] | -4.2 | 17,170 |
| 43 | 47 | **Capital Group of Cos** manages mutual funds; financial svcs | Larry P Clemmensen | Los Angeles, CA | 3,200e | -11.0 | 4,500 |
| 44 | 75 | **Platinum Equity** acquires & operates information-tech companies | Tom T Gores | Los Angeles, CA | 3,200[1] | 33.3 | 15,000 |

## 25 COX ENTERPRISES

# Survival Instincts

Two years ago FORBES called Cox Enterprises Chief Executive James Kennedy the most unmogul-like mogul we'd ever met. The heir to one of the few remaining family media fortunes, Kennedy shuns the spotlight and hates taking credit for his savvy moves in the 1990s that resulted in a ten-year annualized revenue growth rate of 14%. But make no mistake—this would-be wallflower can be shrewd when he wants to be. How else could Cox revenues from its private and public subsidiaries have increased sixfold in total? That's a jump from $1.7 billion in 1988, when Kennedy took over the company, to a projected $10 billion today.

Cox Enterprises encompasses privately held newspaper, television and auto auction businesses, as well as stakes in public companies Cox Communications and Cox Radio. Cox Enterprises, with private revenues of $4.23 billion, is ranked 25 on this year's list of America's largest private companies.

Kennedy, a former reporter and newspaper general manager, runs the conglomerate at the behest of his mother, Barbara Cox Anthony of Honolulu, and aunt, Anne Cox Chambers, a onetime Democratic fundraiser and former ambassador to Belgium, who sit on the board of directors.

Kennedy says he saw the latest economic downturn and resulting ad slump coming before it mired the U.S. economy two years ago, and he started positioning Cox accordingly. For example, he consolidated the chain's flagship papers, merging the morning *Atlanta Constitution* with the afternoon *Atlanta Journal* in November 2001. Today the newspaper group is 35% more profitable than

it was a decade ago during the last downturn.

Although he has cut overhead, Kennedy hasn't turned his ba on growth opportunities. After five years on the We Autotrader.com has become the largest online marketplace used cars. This venture broke through to profitability in the th quarter, and 2002 revenues should top $100 million, a 75% crease over 2001.

Look for Kennedy's next move to involve cable and broadba Kennedy tried (and failed) to buy AT&T Broadband in 2001, but C Communications—the 65% Cox Enterprises-owned publicly trac cable company, with a market capitalization of $17 billion—is c of the few companies that can generate a profit in the cable are Analysts predict Kennedy will try to merge Cox's private televis operation with the public cable business. Cox Television has ready spent $60 million to put its 15 on-air TV stations in the di tal band this year—which opens the door to transmitting multi streams of video.

—*Lynn J. Co*

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[1] [illegible] [2] [illegible] Based on hydrocarbons and [illegible] [3] [illegible] based on average miles driven by competitive hybrid vehicles. © 2002 Toyota Motor Sales, U.S.A., Inc.

| Rank '02 | Rank '01 | Company / Business | Chief Executive | Headquarters | Revenues 2001 ($mil) | Revenues Change (%) | Employees |
|---|---|---|---|---|---|---|---|
| 45 | 46 | **Flying J**<br>truck & travel plaza stops & restaurants; oil | J Phillip Adams | Ogden, UT | 3,150 | -5.4 | 11,500 |
| 46 | 110 | **Sammons Enterprises**<br>insurance, industrial equip sales, bottled water | Robert W Korba | Dallas, TX | 3,085e | 41.8 | 3,000 |
| 47 | 56 | **QuikTrip**<br>gas & convenience stores in South, Midwest & West | Chester Cadieux | Tulsa, OK | 3,050 | 4.1 | 6,575 |
| 48 | 57 | **Bloomberg**<br>online finl data, business news, mags, broadcasting | Lex Fenwick | New York, NY | 3,000e | 5.3 | 8,000 |
| 49 | 66 | **Kohler**<br>plumbing prods; engines; furniture; tile; hotels | Herbert V Kohler Jr | Kohler, WI | 3,000e | 15.4 | 22,000 |
| 50 | 54 | **Schwan's Sales Enterprises**<br>makes & sells frozen pizza & ice cream | M Lenny Pippin | Marshall, MN | 3,000[2] | — | 22,000 |
| 51 | 55 | **JR Simplot**<br>process potatoes, veg, meat; fertilizer; livestock; turf prods | Lawrence S Hlobik | Boise, ID | 3,000 | — | 13,000 |
| 52 | 58 | **RaceTrac Petroleum**<br>convenience stores & gas stations in 13 states | Carl Bolch Jr | Smyrna, GA | 2,942 | 4.7 | 3,850 |
| 53 | 59 | **Wegmans Food Markets**<br>supermarkets; home & garden centers | Robert B Wegman | Rochester, NY | 2,920 | 4.3 | 30,206 |
| 54 | 65 | **Gordon Food Service**<br>distributes food; GFS Marketplace stores | Dan Gordon | Grand Rapids, MI | 2,750[2] | 5.8 | 55,000 |
| 55 | 61 | **Keystone Foods**<br>processes beef & poultry for food svc cos; food distributor | Herbert Lotman | West Conshohocken, PA | 2,716e | 2.5 | 6,700 |
| 56 | 60 | **Perdue Farms**<br>processes poultry & agricultural products | James A Perdue | Salisbury, MD | 2,700e | — | 20,000 |
| 57 | ■ | **Tenaska Energy**<br>power generation, natural gas & energy mktg | Howard L Hawks | Omaha, NE | 2,665 | NA | 450 |
| 58 | 78 | **Gilbane**<br>builds airports, water-treatment plants & other facilities | Paul J Choquette Jr | Providence, RI | 2,658 | 11.3 | 1,700 |
| 59 | 70 | **Stater Bros Markets**<br>156 supermarkets in southern California | Jack H Brown | Colton, CA | 2,653[2] | 4.0 | 13,000 |
| 60 | 52 | **Allegis Group**<br>provides info technology svcs & staffing | John Carey | Hanover, MD | 2,610e | -13.0 | 8,000 |
| 61 | 191 | **JohnsonDiversey**[9]<br>floor care; food sanit & hygiene; appearance products | S Curtis Johnson | Sturtevant, WI | 2,600e[10] | NA | 15,000 |
| 62 | 51 | **International Data Group**<br>computer mags & trade shows; mkt research | Patrick Kenealy | Boston, MA | 2,580 | -14.0 | 13,050 |
| 63 | 73 | **Connell**<br>leases heavy equip; real estate; trades rice & sugar | Grover Connell | Berkeley Heights, NJ | 2,525 | 4.1 | 245 |
| 64 | 72 | **Clark Enterprises**<br>construction, real estate, investments | A James Clark | Bethesda, MD | 2,500[2] | 2.2 | 4,000 |
| 65 | 63 | **Clark Retail Enterprises**<br>convenience stores, gas stations | Brandon K Barnholt | Oak Brook, IL | 2,500 | 11.1 | 7,365 |
| 66 | 82 | **HT Hackney**<br>distributes food, bottled water & petroleum; furniture | William B Sansom | Knoxville, TN | 2,500 | 8.7 | 3,100 |
| 67 | 76 | **Quality King Distributors**<br>distributes drugs, health & beauty-care prods, fragrances | Glenn Nussdorf | Ronkonkoma, NY | 2,450[2] | 2.1 | 1,400 |
| 68 | 71 | **Transammonia**<br>trades fertilizers, liquid petro gas & petrochems | Ronald P Stanton | New York, NY | 2,434 | -0.5 | 237 |
| 69 | 64 | **Consolidated Electrical Distributors**<br>wholesales & distributes electrical equip | Keith W Colburn | Westlake Village, CA | 2,400e | -7.7 | 5,350 |

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| Rank '02 | Rank '01 | Company / Business | Chief Executive | Headquarters | Revenues 2001 ($Mil) | Revenues Change (%) | Employees |
|---|---|---|---|---|---|---|---|
| 70 | 85 | **Springs Industries** makes & markets home furnishings | Crandall Close Bowles | Fort Mill, SC | 2,400e[1] | 5.5 | 17,000 |
| 71 | 137 | **Whiting-Turner Contracting** construct mgr, general contractor & design builder | Willard Hackerman | Baltimore, MD | 2,400 | 45.8 | 2,100 |
| 72 | 49 | **Schneider National** trucking; third-party logistics | Donald J Schneider | Green Bay, WI | 2,388 | -23.0 | 19,349 |
| 73 | 130 | **Kinray** distributes drugs, med supplies, health & beauty prods | Stewart Rahr | Whitestone, NY | 2,310 | 35.1 | 600 |
| 74 | 62 | **A-Mark Financial** trades & mkts rare coins, precious metals; merchant banking | Steven C Markoff | Santa Monica, CA | 2,300[2] | -12.0 | 104 |
| 75 | 67 | **Sinclair Oil** oil refineries, gas stations; ski resorts, hotels | Robert E Holding | Salt Lake City, UT | 2,300e | -11.0 | 6,900 |
| 76 | 79 | **Sirva**[11] relocation services, logistics | Jim Rogers | Naperville, IL | 2,249 | -5.2 | 6,800 |
| 77 | 86 | **Belk** department stores | John M Belk | Charlotte, NC | 2,243 | -1.2 | 18,500 |

61 JOHNSONDIVERSEY

# A Clean Merger

The name JohnsonDiversey is new, but this $2.6 billion company traces its roots back to 1886. More recently, in 1999, it became an independent company when Johnson Wax Professional was split off from its formidable parent, SC Johnson & Son, a manufacturer of well-known consum household products such as Windex and Pledge. The Johnso Diversey appellation came about in May, when the compa doubled its size by merging with Unilever's DiverseyLever.

JohnsonDiversey makes commercial cleaning compoun and equipment, and its offerings include commercial floor wa sanitizers for restaurants and food-processing companie cleansers and deodorizers for restrooms, and industrial c greasers. The firm's CMA Dishmachines subsidiary manufactu commercial dishwashing systems.

With the $1.6 billion acquisition and a 14% global mark share, JohnsonDiversey is now a close second in its business Ecolab, which has 17% of the $32 b lion industrial cleaning materi market. Diversey wasn't a great fit Unilever, which is mostly a consum products company. But Mark Gull a specialty chemicals analyst at Ba of America Securities, says t merger with Johnson Wax Profe sional made sense by combini product lines aimed at more or le the same commercial buyers.

Are more acquisitions, in wha still a fragmented business, on t horizon for JohnsonDiversey? Gul doesn't think that the company attempt any big deals for the fo seeable future. The firm now carr $1.4 billion in debt and has plenty do integrating the two companies.

—*Fei Mei Ch*

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| Rank '02 | Rank '01 | Company / Business | Chief Executive | Headquarters | Revenues 2001 ($mil) | Revenues Change (%) | Employees |
|---|---|---|---|---|---|---|---|
| 78 | 80 | **Black & Veatch** engineering, construct & tech consulting svcs | Len Rodman | Kansas City, MO | 2,224 | -5.7 | 8,500 |
| 79 | 117 | **DreamWorks SKG** produces motion pictures | Jeffrey Katzenberg | Glendale, CA | 2,219 | 18.5 | 1,500 |
| 80 | 89 | **Renco Group** steel, lead & other metals; coal; Hummer vehicles | Ira L Rennert | New York, NY | 2,175[2] | 1.2 | 13,500 |
| 81 | 87 | **Edward Jones** securities & insurance brokerage | John W Bachmann | Maryland Heights, MO | 2,142 | -3.2 | 26,738 |
| 82 | 100 | **Golub** Price Chopper supermkts & Mini Chopper convenience stores | Neil M Golub | Schenectady, NY | 2,125e | 6.3 | 19,700 |
| 83 | 107 | **Schnuck Markets** supermarkets in the Midwest | Craig D Schnuck | St Louis, MO | 2,107[2] | 7.0 | 18,000 |
| 84 | 99 | **Booz Allen Hamilton** management & technology consulting | Ralph W Shrader | McLean, VA | 2,100 | 5.0 | 11,510 |
| 85 | 91 | **Structure Tone** general contractor; construction manager | Anthony Carvette | New York, NY | 2,100e | — | 1,600 |
| 86 | 138 | **Tishman Realty & Construction** construction; building management | John Tishman | New York, NY | 2,080e | 26.8 | 920 |
| 87 | 102 | **Jeld-Wen Holding** mfrs & sells windows, doors, bldg materials; resorts | Roderick Wendt | Klamath Falls, OR | 2,040e | 2.0 | 20,000 |
| 88 | 158 | **Wawa** convenience stores | Richard D Wood | Wawa, PA | 2,010[2] | 34.0 | 13,000 |
| 89 | 81 | **H Group Holding** Hyatt hotels & resorts; assisted living centers | Thomas Pritzker | Chicago, IL | 2,000e | -13.0 | 41,000 |
| 90 | 103 | **KB Toys** mall-based & online toy retailer | Michael L Glazer | Pittsfield, MA | 2,000 | — | 25,000 |
| 91 | 88 | **Kinko's** self-service copying, custom printing, business svcs | Gary Kusin | Dallas, TX | 2,000e | — | 20,000 |
| 92 | 69 | **Micro Warehouse** sells computers & equip online & via catalog | Jerome B York | Norwalk, CT | 2,000e | -22.0 | 2,700 |
| 93 | 116 | **Alex Lee** distributes food; supermarkets | Boyd L George | Hickory, NC | 1,980[2] | 4.8 | 9,000 |
| 94 | 118 | **JF Shea** home builder & general contractor | John F Shea | Walnut, CA | 1,968 | 5.6 | 2,288 |
| 95 | 121 | **DynCorp** technical & consulting svcs to US government | Paul V Lombardi | Reston, VA | 1,960 | 8.3 | 23,300 |
| 96 | 131 | **CH2M Hill Cos** builds & operates water, environ & transport projects | Ralph R Peterson | Greenwood Village, CO | 1,941 | 13.7 | 10,500 |
| 97 | 176 | **HB Zachry** general contractor for power plants & other industrial facilities | HB Zachry Jr | San Antonio, TX | 1,940e | 38.6 | 14,000 |
| 98 | 96 | **TravelCenters of America** full-service truck stops | Ed Kuhn | Westlake, OH | 1,935 | -6.1 | 10,255 |
| 99 | 94 | **Ingram Industries** distributes books; marine transport; insurance | Martha R Ingram | Nashville, TN | 1,929 | -7.0 | 6,148 |
| 100 | 114 | **Sheetz** convenience stores in PA, MD, OH, VA & WV | Stanton R Sheetz | Altoona, PA | 1,920[2] | 1.1 | 8,500 |
| 101 | 125 | **84 Lumber** supplies building materials | Joe Hardy | Eighty Four, PA | 1,904 | 7.3 | 5,400 |
| 102 | 119 | **DeMoulas Super Markets** DeMoulas & Market Basket supermarkets in MA & NH | William J Shea | Tewksbury, MA | 1,900e | 2.7 | 12,700 |

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| Rank '02 | Rank '01 | Company / Business | Chief Executive | Headquarters | Revenues 2001 ($mil) | Revenues Change (%) | Employees |
|---|---|---|---|---|---|---|---|
| 103 | 105 | **Vertis** advertising & marketing | Donald E Roland | Baltimore, MD | 1,900e | -4.7 | 8,500 |
| 104 | 92 | **Scoular** trades & stores grain, feed, food ingredients | Randal L Linville | Omaha, NE | 1,898 | -9.5 | 350 |
| 105 | 97 | **UniGroup** United Van Lines & Mayflower Transit movers | Gerald P Stadler | Fenton, MO | 1,896 | -5.6 | 1,400 |
| 106 | 93 | **Carlson Cos** restaurants, hotels, cruises, travel agencies; marketing | Marilyn Carlson Nelson | Minneapolis, MN | 1,885e | -9.5 | 53,000 |
| 107 | 149 | **Fry's Electronics** consumer electronics stores | John Fry | San Jose, CA | 1,850e | 20.9 | 4,900 |
| 108 | 185 | **Epix Holdings** human resources outsourcing | Thomas S Taylor | Tampa, FL | 1,842 | 38.4 | 400 |
| 109 | 112 | **Dr Pepper/7 Up Bottling Group** bottles soft drinks | Jim Turner | Dallas, TX | 1,820e | -4.2 | 8,000 |

84 BOOZ ALLEN

# Booz Allen's Sweet Spot

Visited the Internal Revenue Service's Web site lately? If not, you're in for a surprise. The site is clean, well organized—even a tad humorous. We liked www.irs.gov enough to put it on Forbes' *Best of The Web* list.

The site reflects the work of Booz Allen Hamilton, the McLean, Va.-based consulting firm. Booz Allen was chosen in 1998 to help the IRS modernize and also shed its dismal customer-service reputation. The firm was a logical choice, as 8,000 of its 11,000 employees work in its government and technology practice. This group handles projects ranging from conducting studies for governments on how to offer services via the Web to helping agencies and departments revamp or outsource their information technology.

Edwin Booz, the enterprising economics and psychology graduate who founded the firm in 1914, pioneered the notion that an outsider could analyze a business and devise ways for it to improve profitability or crack new markets. In its history, Booz has had engagements as varied as helping organize the National Football League in the 1960s, advising on the breakup of Ma Bell and, more recently, helping Nissan restructure to achieve its amazing turnaround.

Booz's team on the IRS project, 250 strong, figured out a method for the IRS to reshuffle its 100,000 employees into units focused on particular taxpayer categories: individuals, charities, businesses and so on. "We made some very dramatic changes in the way the IRS is organized," says Booz Chief Exec-

Booz boss Ralph Shrade

utive Ralph Shrader, an electrical engineering Ph.D. and 2 year company veteran.

Result: The IRS' public confidence numbers are up 20% sin 1998, no small feat for an agency so widely reviled, and the sta has been set for the massive task of modernizing the agenc computer systems.

Engagements like the IRS job have helped Booz keep its fo ing in a slippery economy for consultants. Booz Allen's sales, h of which are drawn from the public sector, rose 5% to $2.1 billi for the fiscal year ended last March. Strategy competitors McKi sey and Boston Consulting Group, whose work is skewed more commercial clients, both showed declines in fiscal 2001 revenu

If anything, Booz is likely to capitalize on the expected ri in federal government spending on goods and services, and the overhaul planned for the nation's military and the hom land security force. —*Andrew T. Gilli*

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*The focus has been intentionally adapted for this advertisement.

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| Rank '02 | Rank '01 | Company / Business | Chief Executive | Headquarters | Revenues 2001 ($mil) | Revenues Change (%) | Employees |
|---|---|---|---|---|---|---|---|
| 110 | 290 | VarTec Telecom<br>data, local & long-distance telephone svcs | A Joe Mitchell Jr | Dallas, TX | 1,820[1,12] | 82.9 | 2,900 |
| 111 | 172 | Hunt Construction Group<br>general contractor, construction mgmt | Robert G Hunt | Indianapolis, IN | 1,811 | 27.7 | 850 |
| 112 | 132 | Andersen Windows<br>makes windows & patio doors | Donald Garofalo | Bayport, MN | 1,800[2] | 5.9 | 7,000 |
| 113 | 134 | Grant Thornton International<br>accounting & consulting svcs | David McDonnell | Chicago, IL | 1,800e[3] | 5.9 | 22,000 |
| 114 | 128 | Leprino Foods<br>processes mozzarella cheese | James Leprino | Denver, CO | 1,800e | 5.0 | 3,000 |

## 180 RITZ CAMERA

# High Contrast

When David Ritz, chief executive of Ritz Camera Centers, bought 400 stores from bankrupt rival Wolf Camera last year for $85 million, he cemented his company's place as the nation's largest chain of retail camera and photo processing shops. Ritz now has over 1,200 stores in 48 states and estimated revenues of $1.34 billion. But the deal had a side benefit: It brought a 28-year-old family rift full circle.

After Ritz, Wolf Camera was the nation's second-largest chain—and it was owned by Ritz's cousin Chuck R. Wolf. Both David and Chuck are descendants of Benjamin Ritz, a photographer who started with an Atlantic City portrait studio in 1920 and went into retail camera sales 20 years later.

The younger Ritz and Wolf began their careers in the family business, but in 1974 Wolf cashed out his family stock and set up a rival company in Georgia with 9 stores. By 1998 he had 700. "We're both very competitive," says Ritz, 53, who admits only to professional animosity with his cousin. "He just wanted to do something on his own."

But Wolf's furious growth strategy ran aground after he purchased the Fox Photo chain of film labs from Kodak in 1998 for $64.5 million. Even after shedding 300 stores, Wolf filed for bankruptcy last year, citing $115 million in assets and $183 million in liabilities. Now Wolf is back in the family fold as vice chairman of Ritz Camera.

Adding more camera and photofinishing stores seems like a risky move, given the rapid growth in digital photography and the expansion of giant electronics stores, like Best Buy and Circuit City, which have doubled their share of the camera market in the past five years, to 13%. But the big vendors are mostly stealing business from discount stores like Walgreens and

Kmart, not from specialty camera shops.

Camera retailers like Ritz have maintained about 12% of th market over the past five years, catering to customers wh appreciate the higher level of expertise and service a special camera store provides.

Sales of digital cameras have increased 64% this year, ar that's a threat to the $6.7 billion film-processing business. Dav Ritz hopes to make up some of the slack by equipping virtual all of his stores with the technology to make high-quality prin from a customer's memory card or disc. And Ritz stores se everything from a $60 digital Argus point-and-shoot digital can era to a Contax N single lens reflex digital camera with 6.2 megapixels. That will run you $7,000 just for the camera body

Ritz also has Internet sites where customers can buy can eras, film and accessories and can also read product reviev and share digital photos.

Should all else fail, Ritz has covered his bases by diversifyir into Boater's World Marine Centers—110 stores selling boatir supplies like electronic fish finders, navigation systems ar radios for boaters and fishermen. The digital age has not y rendered boats obsolete. —*David Armstro*

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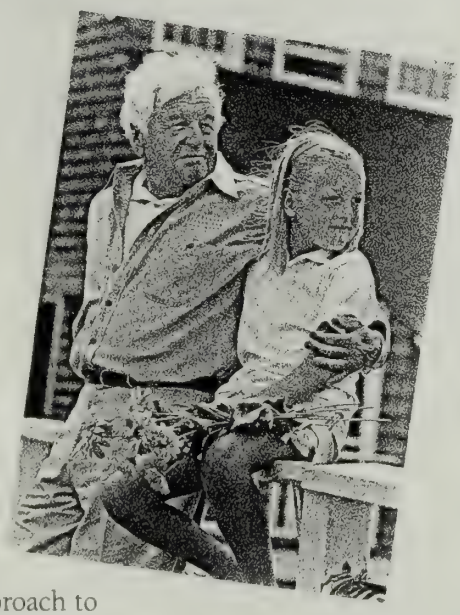

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|---|---|---|---|---|---|---|---|
| 115 | 175 | **Software House International** computer hardware, software & svcs | Leo Koguan[13] | Somerset, NJ | 1,800 | 28.6 | 1,000 |
| 116 | 77 | **Venture Industries** manufactures plastic auto components | Larry Winget | Fraser, MI | 1,800e[1] | NA | 10,500 |
| 117 | 141 | **E&J Gallo Winery** generic & premium wines & wine prods | Joseph E Gallo[14] | Modesto, CA | 1,780e[15] | 11.3 | 3,600 |
| 118 | 181 | **Hensel Phelps Construction** commercial & industrial construction | Jerry L Morgensen | Greeley, CO | 1,771 | 29.5 | 2,200 |
| 119 | 109 | **DPR Construction** general contractor of tech-based facilities | Peter Nosler | Redwood City, CA | 1,748 | -11.0 | 2,600 |
| 120 | 133 | **Brookshire Grocery** Brookshire & Super 1 supermarkets | Bruce Brookshire | Tyler, TX | 1,740e | 2.7 | 11,500 |
| 121 | 146 | **Follett** college bookstores; wholesales educational prods & svcs | Christopher D Traut | River Grove, IL | 1,733 | 11.5 | 10,000 |
| 122 | 349 | **Houchens Industries** supermarkets & convenience stores; cigarettes | Jim Gipson | Bowling Green, KY | 1,727[2] | 111.0 | 5,850 |
| 123 | 139 | **National Distributing** distributes alcoholic & nonalcoholic beverages | Michael C Carlos[16] | Atlanta, GA | 1,725e | 5.8 | 2,500 |
| 124 | 95 | **Haworth** office furniture & seating | Gerald B Johanneson | Holland, MI | 1,710 | -17.0 | 10,000 |
| 125 | 140 | **Rich Products** Coffee Rich; food svcs; in-store bakery goods | Robert E Rich Jr | Buffalo, NY | 1,702 | 5.1 | 6,500 |
| 126 | 143 | **Aecom Technology** engineering, design, project mgmt | Richard Newman | Los Angeles, CA | 1,700[2] | 12.4 | 15,500 |
| 127 | 108 | **Crown Central Petroleum** petroleum refiner & marketer | Frank B Rosenberg | Baltimore, MD | 1,700e | -13.0 | 2,600 |
| 128 | 152 | **Cumberland Farms** convenience stores, gas stations | Lily H Bentas | Canton, MA | 1,700 | 13.3 | 6,976 |
| 129 | 101 | **Hunt Consolidated/Hunt Oil** oil & gas; Hyatt hotels; electric power | Ray L Hunt | Dallas, TX | 1,700e | -15.0 | 2,500 |
| 130 | 124 | **Quad/Graphics** prints catalogs & magazines | Thomas A Quadracci | Pewaukee, WI | 1,700 | -5.6 | 10,500 |
| 131 | 106 | **Gulf Oil** wholesales petroleum products | Gary Kaneb | Chelsea, MA | 1,680e | -13.0 | 150 |
| 132 | 211 | **Purdue Pharma** prescription & over-the-counter drugs | Mortimer D Sackler[17] | Stamford, CT | 1,660e | 38.3 | 5,000 |
| 133 | 126 | **Golden State Foods** processes & distributes food to food svc industry | Mark S Wetterau | Irvine, CA | 1,659 | -6.0 | 2,000 |
| 134 | 162 | **Services Group of America** distributes food & supplies | Thomas J Stewart | Seattle, WA | 1,650 | 11.5 | 3,300 |
| 135 | 120 | **Central National-Gottesman** distributes pulp & paper | Kenneth L Wallach | Purchase, NY | 1,628 | -11.0 | 800 |
| 136 | 161 | **Glazer's Wholesale Drug** distributes wine, alcoholic & soft drinks | Bennett J Glazer | Dallas, TX | 1,600e | 8.1 | 3,600 |
| 137 | 166 | **Purity Wholesale Grocers** distributes groceries, health & beauty prods & drugs | Salvatore Ricciardi | Boca Raton, FL | 1,600 | 10.3 | 490 |
| 138 | 151 | **Save Mart Supermarkets** Save Mart & Food Maxx supermarkets in California | Robert Piccinini | Modesto, CA | 1,600 | 5.0 | 7,300 |
| 139 | 164 | **General Parts** Carquest auto parts stores; distributes auto parts | O Temple Sloan Jr | Raleigh, NC | 1,562 | 7.1 | 13,000 |

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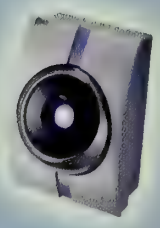

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| Rank '02 | Rank '01 | Company / Business | Chief Executive | Headquarters | Revenues 2001 ($Mil) | Revenues Change (%) | Employees |
|---|---|---|---|---|---|---|---|
| 140 | 129 | **Builders FirstSource** makes & distributes building materials | Floyd F Sherman | Dallas, TX | 1,561 | -8.7 | 6,800 |
| 141 | 163 | **Asplundh Tree Expert** vegetation management & utility-related svcs | Christopher B Asplundh | Willow Grove, PA | 1,557 | 5.7 | 26,385 |
| 142 | 148 | **Swinerton** construction | David H Grubb | San Francisco, CA | 1,549 | -0.1 | 1,350 |
| 143 | ■ | **Dresser** energy-related equip, svcs to energy companies | Patrick M Murray | Addison, TX | 1,546 | 9.8 | 8,500 |
| 144 | 194 | **WinCo Foods** WinCo Food Stores | William D Long | Boise, ID | 1,540 | 18.5 | 6,500 |
| 145 | 160 | **DiGiorgio** wholesales White Rose & national-brand foods | Richard B Neff | Carteret, NJ | 1,539 | 2.9 | 1,353 |
| 146 | 187 | **Dunn Industries** general contractor, construction & program mgmt | Terrence P Dunn | Kansas City, MO | 1,533 | 16.9 | 3,000 |
| 147 | 243 | **Dot Foods** food distributor | Patrick F Tracy | Mount Sterling, IL | 1,500[2] | 35.5 | 1,750 |

# 185 POLAROID

## Levitating a Fallen Angel

It's a long way down from the Nifty Fifty. Polaroid's leading-edge instant cameras made it one of the 50 elite stocks to own in the early 1970s. But the company has been undermined by the rapid emergence of digital imaging and crippled by debt taken on in the 1980s to avoid a takeover by Roy Disney's Shamrock Holdings. In its October 2001 bankruptcy Polaroid's stock became worthless.

Picking up the pieces of what is now a private company is One Equity Partners, a $3.5 billion venture capital arm of Bank One. On July 31 One Equity bought 65% of Polaroid's assets (except its underfunded pension fund) for $255 million, with the other 35% to be doled out to unsecured credit holders by the bankruptcy judge. While Polaroid executives declined to discuss future plans, it's clear the company is betting its rebound on the digital market.

Not that Polaroid hasn't tried before. The company is distantly behind Sony, Olympus and Kodak in digital cameras, with less tha 5% of the $3.2 billion U.S. market. Former Polaroid diehards, li insurance adjusters and real estate agents, are flocking to digita eroding highly profitable sales of instant film. That's one reaso revenues dropped 30% la year to an estimated $1 billion.

To get itself into the di ital game Polaroid is no trying a backdoor a proach—self-service kiosk where people will be able plug in the memory car from their digital camera view each image and print using proprietary Polaro technology. The compa claims that such prints w be equal in quality to fil prints. "This is the Holy Gr the digital camera indust has been looking for," bra Polaroid spokesman He bert N. Colcord. Test runs shops in Massachusetts a planned this winter, with t aim of a national rollout by the end of 2003.

The company is also looking for ways to milk its once-premi brand name. Its first foray into licensing was a deal with Wal-Ma to slap the Polaroid name on Agfa 35mm film. The company hop to do the same with digital cameras through its new deal with Ho Kong's WWL.

—*Brendan Coff*

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|---|---|---|---|---|---|---|---|
| 148 | 169 | **Frank Consolidated Enterprises**<br>fleet leasing & management | James Frank | Des Plaines, IL | 1,500[2] | 7.1 | 600 |
| 149 | 154 | **Grocers Supply**<br>distributes food to convenience stores & supermkts | Milton Levit | Houston, TX | 1,500 | — | 2,200 |
| 150 | 186 | **Maritz**<br>travel svcs, perf improvement, education & marketing | Steve Maritz | Fenton, MO | 1,500[1] | 13.8 | 6,000 |
| 151 | 74 | **Parsons**<br>international engineering & construction svcs | James F McNulty | Pasadena, CA | 1,500[1] | NA | 9,500 |
| 152 | 182 | **Schreiber Foods**<br>makes & packages cheese, frozen entrées | Larry Ferguson | Green Bay, WI | 1,500e | 10.9 | 4,400 |
| 153 | 157 | **Southwire**<br>heavy wire & cable; copper & aluminum rods | Stuart Thorn | Carrollton, GA | 1,500 | — | 3,300 |
| 154 | 188 | **Young's Market**<br>distributes wine & spirits | Charles Andrews | Orange, CA | 1,485e | 13.4 | 1,700 |
| 155 | 127 | **BE&K**<br>engineering, construction & maintenance | T Michael Goodrich | Birmingham, AL | 1,478 | -16.0 | 8,822 |
| 156 | 168 | **Towers Perrin**<br>human resources & financial svcs consulting | Mark V Mactas | New York, NY | 1,469 | 1.4 | 9,009 |
| 157 | 159 | **DHL Airways**<br>international air-express delivery | Vicki Bretthauer | Barrington, IL | 1,462 | -2.4 | 10,087 |
| 158 | 111 | **Ergon**<br>refines petroleum; computer equip; trucking | Leslie B Lampton Sr | Jackson, MS | 1,460e | -23.0 | 2,000 |
| 159 | 173 | **Flint Ink**<br>manufactures printing ink & coatings | H Howard Flint II | Ann Arbor, MI | 1,450 | 3.6 | 4,000 |
| 160 | 177 | **Walsh Group**<br>general contractor, construction mgr, design builder | Matthew M Walsh | Chicago, IL | 1,443 | 4.0 | 5,000 |
| 161 | 178 | **Horizon Natural Resources**[18]<br>coal mines; makes mining equip | Donald Brown | Ashland, KY | 1,413 | 2.4 | 4,000 |
| 162 | 98 | **Apex Oil**<br>distributes, stores & trades petroleum prods | Paul Anthony Novelly | Clayton, MO | 1,400e | -30.0 | 175 |
| 163 | 201 | **Bose**<br>audio systems; noise-reduction headsets | Amar G Bose | Framingham, MA | 1,400 | 12.0 | 7,000 |
| 164 | 153 | **Delaware North Cos**<br>park svcs & sports concessions | Jeremy M Jacobs | Buffalo, NY | 1,400e | -6.7 | 25,000 |
| 165 | 170 | **Heico Cos**<br>industrial machinery, heavy equipment | Michael E Heisley Sr | Chicago, IL | 1,400e | -1.8 | 9,000 |
| 166 | 210 | **Mary Kay**<br>markets cosmetics & personal care prods via direct selling | Richard Rogers | Dallas, TX | 1,400[2] | 16.7 | 3,600 |
| 167 | 83 | **Metaldyne**<br>designs & makes transportation equip | Timothy Leuliette | Plymouth, MI | 1,400e[1] | NA | 8,500 |
| 168 | 145 | **AG Spanos Cos**<br>commercial & residential construction; real estate dev | Dean A Spanos | Stockton, CA | 1,400e | -10.0 | 600 |
| 169 | ■ | **Vought Aircraft Industries**<br>aerostructure subcontractor | Tom Risley | Dallas, TX | 1,400 | NA | 5,000 |
| 170 | 165 | **Metromedia**<br>steak houses & other restaurants; outdoor ads | John W Kluge | East Rutherford, NJ | 1,397e | -3.7 | 28,500 |
| 171 | 203 | **ABC Supply**<br>distributes roofing, siding, insulation, windows & tools | Kenneth A Hendricks | Beloit, WI | 1,382 | 11.5 | 3,078 |
| 172 | 179 | **Ebsco Industries**<br>subscription svcs; databases; printing; fishing/hunting prods | James T Stephens | Birmingham, AL | 1,380e | — | 4,500 |

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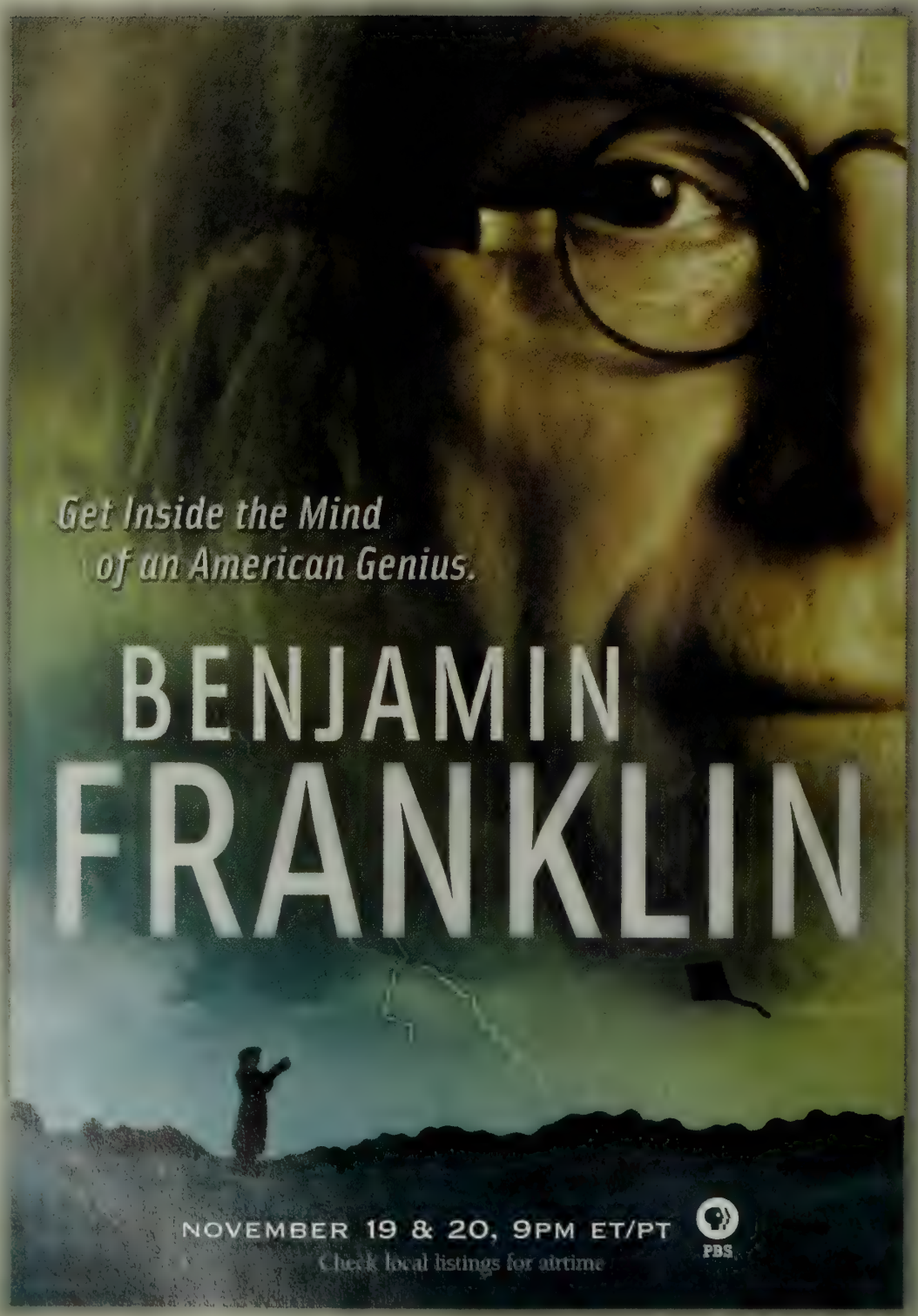


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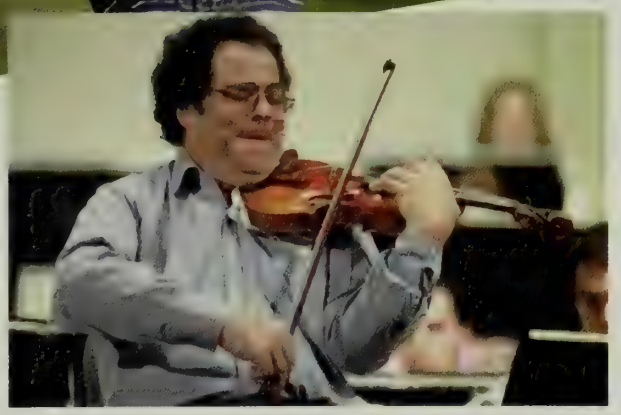
| Rank '02 | '01 | Company / Business | Chief Executive | Headquarters | Revenues 2001 ($mil) | Revenues Change (%) | Employees |
|---|---|---|---|---|---|---|---|
| 173 | 207 | **DeBruce Grain** grain elevators; merchandises grain, trades fertilizer | Paul DeBruce | Kansas City, MO | 1,378 | 14.7 | 400 |
| 174 | 150 | **Borden Chemical** industrial chems & resins, UV curable coatings | Craig O Morrison | Columbus, OH | 1,372 | -10.0 | 2,800 |
| 175 | 135 | **Amsted Industries** railroad & industrial equip, building materials | W Robert Reum | Chicago, IL | 1,360e | -6.2 | 9,000 |
| 176 | 218 | **Bashas'** Bashas' & other supermarkets in Arizona | Edward N Basha Jr | Chandler, AZ | 1,359[2] | 16.2 | 10,800 |
| 177 | 213 | **Parsons Brinckerhoff** engineering & construction management | Thomas J O'Neill | New York, NY | 1,350[2] | 0.2 | 9,294 |

189 IMG

# Special Agent

It began with a handshake with Arnold Palmer after a round of golf in 1960. "Arnold and I never had a written deal and still don't to this day," says Mark McCormack, founder of the sports management giant IMG. He's inked a few since then, though.

By representing celebrities and sports stars like Tiger Woods, Peyton Manning, Heidi Klum, Itzhak Perlman—even the Pope was once a client—McCormack, 72, has built IMG into a $1.26 billion (revenues) company with 85 offices in 35 countries, involved in television production, consulting, event planning and, of course, representation.



Though McCormack is now expanding IMG's presence in modeling and literary representation, sports is still the heart of the business. Representing athletes and producing sports events constitute 80% of IMG's revenues, of which about half are generated by its television arm, TWI, which handles events such as Wimbledon and the Olympics. But it's the company's ability to produce its own content that separates it from competitors like SFX.

Example: For the British Masters, a European PGA event, IMG is in charge of every aspect of the golf tournament—from grass-cutting to providing on-air commentary—so it guarantees sponsors airtime. And at such contests, IMG showcases its own talent. Most of the big names on golf's European Tour, like Colin Montgomerie and Sergio Garcia, are clients. IMG also has a big presence in cricket and rugby.

Recent challenges? After Sept. 11 the Ryder Cup golf tournament in England (which IMG televises) was postponed, and IMG tennis stars Venus and Serena Williams skipped playing in Europe. And just last month, after the terrorist bombing in Bali, an Australian cricket team canceled its travel plans. Another problem is the world economy. "Sponsorship dollars are the first to go in tough times," says McCormack.

But that hasn't stopped McCormack from pushing. IMG has made the world's number one sport, soccer, a priority, signing 500 players and 35 national teams in the last five years. In its search for the stars of tomorrow, IMG owns the Bollettieri Tennis Academy in Bradenton, Fla., where its preeminent training academies for golf, soccer and baseball are also housed. It's also a founder of the Chinese National Basketball League, a position that could help it discover the next great foreign NBA player.

When will McCormack—a notoriously energetic man who still plays golf with Arnold Palmer and tennis with Monica Seles—slow down? Not anytime soon. "Most people retire to do what I do every day," he says.

*—Monte Burke*

| Rank '02 | Rank '01 | Company / Business | Chief Executive | Headquarters | Revenues 2001 ($mil) | Revenues Change (%) | Employees |
|---|---|---|---|---|---|---|---|
| 178 | 192 | **Lanoga** lumber/building materials stores in 18 states | Paul Hylbert | Redmond, WA | 1,344e | 3.4 | 5,367 |
| 179 | 197 | **Life Care Centers of America** nursing, assisted- & independent-living centers | Forrest L Preston | Cleveland, TN | 1,340 | 5.9 | 29,650 |
| 180 | 189 | **Ritz Camera Centers** photography stores; boat stores | David Ritz | Beltsville, MD | 1,340e | 2.7 | 12,000 |
| 181 | 214 | **Discount Tire** operates 500 tire stores in 19 states | Gary T Van Brunt | Scottsdale, AZ | 1,320 | 10.7 | 8,415 |
| 182 | 167 | **Sierra Pacific Industries** lumber & millwork products; windows | Red Emmerson | Redding, CA | 1,315e | -9.3 | 3,600 |
| 183 | 147 | **Day & Zimmermann** temp tech svcs; engineering; construction; defense | Harold L Yoh III | Philadelphia, PA | 1,300 | -16.0 | 20,000 |
| 184 | 156 | **National Gypsum** makes gypsum wallboard | Thomas C Nelson | Charlotte, NC | 1,300e | -13.0 | 2,600 |
| 185 | ■ | **Polaroid** cameras, digital imaging prods & films | William Flarity | Waltham, MA | 1,300e | -30.0 | 4,200 |
| 186 | 205 | **G-I Holdings** makes roofing & other building materials | Sunil Kumar | Wayne, NJ | 1,293 | 7.0 | 3,400 |
| 187 | 195 | **SF Holdings** paper & plastic utensils & containers | Dennis Mehiel | New York, NY | 1,277e | -3.0 | 6,370 |
| 188 | 235 | **Foster Farms** processes chicken, turkey & deli meats; feed mills | Paul Carter | Livingston, CA | 1,269 | 12.6 | 11,000 |
| 189 | 184 | **IMG** talent mgmt svcs; special events; TV programs; licensing | Mark H McCormack | Cleveland, OH | 1,260e | -6.7 | 2,500 |
| 190 | 270 | **Rooms To Go** furniture stores | Jeffrey Seaman | Seffner, FL | 1,260 | 21.2 | 5,500 |
| 191 | 221 | **Domino's Pizza** pizza delivery & carryout | David A Brandon | Ann Arbor, MI | 1,258 | 7.8 | 12,600 |
| 192 | 208 | **Austin Industries** heavy, commercial & indust construction & mgmt | Ronald J Gafford | Dallas, TX | 1,257 | 4.8 | 6,000 |
| 193 | 223 | **Barton Malow** builds corporate, industrial & public facilities | Ben Maibach III | Southfield, MI | 1,251 | 7.8 | 1,264 |
| 194 | 279 | **Medline Industries** medical-surgical, wound-care prods & textiles | Charles S Mills | Mundelein, IL | 1,251 | 23.1 | 3,616 |
| 195 | 233 | **Riverwood International** coated kraft paperboard; paper mills; packaging machinery | Stephen M Humphrey | Atlanta, GA | 1,250 | 10.7 | 4,100 |
| 196 | 199 | **ICC Industries** chemicals, plastics & pharmaceuticals | John J Farber | New York, NY | 1,249[4] | -0.9 | 2,300 |
| 197 | 193 | **Taylor** printing, stationery; direct-mail mktg; elec equip | Brad Schreier | North Mankato, MN | 1,248e | -4.0 | 14,000 |
| 198 | 209 | **Barnes & Noble College Bookstores** college & online bookstores | Leonard Riggio | New York, NY | 1,240e | 3.3 | 9,500 |
| 199 | 174 | **WL Gore & Associates** fabrics; electronics; industrial & medical prods | Charles E Carroll | Newark, DE | 1,230 | -12.0 | 6,000 |
| 200 | 224 | **Skadden, Arps** law firm | Robert C Sheehan | New York, NY | 1,225e | 6.2 | 4,350 |
| 201 | 265 | **Rooney Brothers** construction; electronics; real estate; building materials | LF Rooney III | Tulsa, OK | 1,201 | 14.1 | 2,500 |
| 202 | 287 | **Genmar Holdings** makes motorized recreational boats | Grant Oppegaard | Minneapolis, MN | 1,200e | 20.0 | 6,500 |

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| Rank '02 | Rank '01 | Company / Business | Chief Executive | Headquarters | Revenues 2001 ($mil) | Revenues Change (%) | Employees |
|---|---|---|---|---|---|---|---|
| 203 | 244 | **Sealy** makes & markets mattresses & foundations | David McIlquham | Trinity, NC | 1,197 | 8.6 | 6,410 |
| 204 | 261 | **Ben E Keith** distributes food & Anheuser-Busch beer | Robert Hallam | Fort Worth, TX | 1,185 | 11.0 | 2,526 |
| 205 | 232 | **Wilbur-Ellis** distributes agrichems & fertilizers & industrial chems | Herbert B Tully | San Francisco, CA | 1,185 | 4.8 | 2,300 |
| 206 | 274 | **Battelle Memorial Institute** technology development & commercialization | Carl F Kohrt | Columbus, OH | 1,176 | 14.3 | 8,700 |
| 207 | 226 | **Big Y Foods** 47 supermarkets in Connecticut & Massachusetts | Donald H D'Amour | Springfield, MA | 1,170e | 1.4 | 7,850 |
| 208 | 297 | **Hoffman** industrial & commercial construction | Wayne A Drinkward | Portland, OR | 1,165 | 22.1 | 1,200 |
| 209 | 255 | **Michael Foods** produces liquefied eggs & refrigerated foods | Gregg A Ostrander | Minnetonka, MN | 1,161 | 7.4 | 4,050 |

## 209 MICHAEL FOODS

# Guarding the Henhouse

Eggs have been a commodity for several millennia, but Michael Foods aims for a little value added. The Minnetonka, Minn. firm cracks them open and pasteurizes them to eliminate salmonella and listeria bacteria. The company every year turns 11 billion eggs laid by 30 million hens into a billion pounds of Better'n Eggs, Table Ready, Easy Eggs, All Whites and other products.

Seventy percent of the processed eggs go to food service companies such as Aramark, Burger King, Dairy Queen, Hilton Hotels and the International House of Pancakes. The company also processes potato and dairy foods and distributes refrigerated foods, though it recently announced that the refrigerated foods business may be up for sale. A quarter of Michael's business is in retail egg-derivatives and refrigerated potatoes.

"The trend is that more and more egg consumption is moving away from the traditional shell form," says Chief Executive Officer Gregg Ostrander. Think of the phenomenon as the industrial version of the American shift away from home cooking.

Egg-related foods are Michael's largest source of incon contributing 56% of the $1.16 billion in annual sales and 84% its $74 million in profits. That means Michael has 40% of t $1.5 billion processed egg business.

Ostrander protects his market share like rooster guarding his nest of hens. Over t years the company has filed several la suits against other food companies t alleged infringement on the ultrapa teurization patents that it licenses fr North Carolina State University. 2000 Michael restarted a laws against Sunny Fresh Foods, a di sion of Cargill *(see p. 160)*, after t N.C. State patents were upheld the U.S. Patent & Trademark Offi The case is expected to go to tr next spring.

Regardless of the outcome of suit against Sunny Fresh, these pate will expire over the next four to ei years, so Ostrander realizes he has to prepared for a more competitive environme Expansion is one option. To that effect, ear this year the company bought the egg business Canadian Inovatech, an Abbotsford, B.C. firm, wh should add $45 million to annual sales.

Michael Foods' management also picked a good time to t the company private. Two years ago, in a stock market that v much more enamored of the Internet than poultry, Michael Fo underwent an $800 million buyout by Vestar Capital Partne Goldner Hawn Johnson & Morrison, and affiliates of the Mich family and management. —*Vivian V*

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EMPLOYEE BENEFITS

| Rank '02 | Rank '01 | Company / Business | Chief Executive | Headquarters | Revenues 2001 ($mil) | Revenues Change (%) | Employees |
|---|---|---|---|---|---|---|---|
| 210 | 254 | **Conair**<br>hair dryers & appliances; personal care prods | Ron Diamond[19] | East Windsor, NJ | 1,151 | 6.4 | 4,592 |
| 211 | 237 | **SAS Institute**<br>data warehousing & data mining software & svcs | James H Goodnight | Cary, NC | 1,130 | 0.9 | 8,800 |
| 212 | ■ | **FHC Health Systems**<br>health care svcs; pharmacy benefits management | Ronald I Dozoretz | Falls Church, VA | 1,128 | 13.7 | 7,400 |
| 213 | 256 | **MA Mortenson**<br>design-builder, general contractor, construct management | M A Mortenson, Jr | Minneapolis, MN | 1,128 | 4.4 | 1,800 |
| 214 | 240 | **Goodman Manufacturing**<br>makes air conditioners, heating & ventilation equip | John B Goodman | Houston, TX | 1,125e | 0.9 | 3,750 |
| 215 | 289 | **TIC-The Industrial Co**<br>builds power & petrochem plants & other facilities | Ron McKenzie | Steamboat Springs, CO | 1,123 | 12.5 | 5,000 |
| 216 | 283 | **Baker & Taylor**<br>distributes books & entertainment media | Gary M Rautenstrauch | Charlotte, NC | 1,122 | 12.2 | 2,750 |
| 217 | 277 | **JM Huber**<br>chemicals; wood prods; energy exploration | Peter T Francis | Edison, NJ | 1,122 | 9.8 | 3,003 |
| 218 | 239 | **Modern Continental Cos**<br>heavy, residential & commercial construction | Lelio Marino | Cambridge, MA | 1,117 | -0.1 | 4,823 |
| 219 | 122 | **American Tire Distributors**[20]<br>distributes tires, repairs autos | Richard P Johnson | Huntersville, NC | 1,108 | -39.0 | 2,025 |
| 220 | 298 | **Ashley Furniture Industries**<br>makes & distributes furniture | Todd Wanek | Arcadia, WI | 1,100e | 15.5 | 6,000 |
| 221 | 225 | **LL Bean**<br>outdoor sporting goods & apparel | Chris McCormick | Freeport, ME | 1,100e | -4.3 | 4,200 |
| 222 | 171 | **Breed Technologies**<br>automotive safety systems & components | John M Riess | Lakeland, FL | 1,100e | -23.0 | 16,000 |
| 223 | ■ | **Columbia House**<br>markets music, videos & entertainment prods | Scott Flanders | New York, NY | 1,100e | NA | 4,000 |
| 224 | 219 | **Dart Container**<br>polystyrene cups & other food containers | Kenneth B Dart | Mason, MI | 1,100e | -6.0 | 4,950 |
| 225 | 267 | **Dick Corp**<br>industrial & heavy civil contractor & manager | Dennis Watts | Pittsburgh, PA | 1,100 | 4.8 | 3,500 |
| 226 | 242 | **Shamrock Foods**<br>distributes food; processes dairy products | Norman McClelland | Phoenix, AZ | 1,093 | -1.4 | 2,143 |
| 227 | 284 | **Bass Pro**<br>sporting goods stores | John L Morris | Springfield, MO | 1,090e | 9.0 | 8,800 |
| 228 | 312 | **Love's Travel Stops**<br>travel centers, convenience stores | Tom Love | Oklahoma City, OK | 1,086 | 21.5 | 3,200 |
| 229 | 295 | **Honickman Affiliates**<br>bottles soft drinks | Jeffrey Honickman | Pennsauken, NJ | 1,076e | 9.5 | 5,000 |
| 230 | 227 | **Nesco**<br>industrial equipment; engineering svcs | Robert J Tomsich | Mayfield Heights, OH | 1,065e | -7.4 | 9,500 |
| 231 | 220 | **Noveon**<br>makes specialty chems, coatings & plastics | Stephen J Demetriou | Cleveland, OH | 1,063 | -9.0 | 2,790 |
| 232 | 271 | **Arctic Slope Regional**<br>oilfield svcs; refines & distribs petrol; engineering & construct | Jacob Adams | Barrow, AK | 1,062 | 2.7 | 6,413 |
| 233 | 282 | **Baker & McKenzie**<br>law firm | Christine Lagarde | Chicago, IL | 1,060 | 6.0 | 8,120 |
| 234 | 228 | **North Pacific Group**<br>trades & distribs forest, bldg, ag, food, steel & other prods | T J Tomjack | Portland, OR | 1,060 | -7.8 | 850 |

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| Rank '02 | Rank '01 | Company / Business | Chief Executive | Headquarters | Revenues 2001 ($Mil) | Revenues Change (%) | Employees |
|---|---|---|---|---|---|---|---|
| 235 | 252 | **UIS** auto parts; confectionery prods; millwork prods | Andrew G Pietrini | Jersey City, NJ | 1,056 | -2.9 | 8,820 |
| 236 | 262 | **Anderson News** wholesales periodicals & books | Charles Anderson | Knoxville, TN | 1,054e | -0.8 | 7,000 |
| 237 | 251 | **Delco Remy International** starters & alternators for cars & trucks | Thomas J Snyder | Anderson, IN | 1,053 | -3.1 | 7,422 |
| 238 | 246 | **Boston Consulting Group** consulting | Carl W Stern | Boston, MA | 1,050 | -4.5 | 4,450 |
| 239 | 293 | **Stevedoring Services of America** loads & unloads ships & provides port svcs | Jon F Hemingway | Seattle, WA | 1,046e | 5.8 | 10,000 |
| 240 | 278 | **Buffets** franchises & operates buffet-style restaurants | Kerry A Kramp | Eagan, MN | 1,045 | 2.4 | 25,000 |
| 241 | ■ | **JD Heiskell** grain storage; livestock feed | Scott Hillman | Tulare, CA | 1,036 | 142.0 | 370 |
| 242 | 206 | **McCarthy Building Cos** general contractor; construction manager | Michael D Bolen | St Louis, MO | 1,036 | -14.0 | 2,000 |
| 243 | 266 | **Carpenter** makes polyurethane foam | Stanley F Pauley | Richmond, VA | 1,035[2] | -1.4 | 6,200 |
| 244 | 306 | **24 Hour Fitness Worldwide** fitness centers | Mark S Mastrov | San Francisco, CA | 1,029 | 13.0 | 27,000 |
| 245 | ■ | **Herbalife International** health & nutritional supplements, weight-control prods | Francis X Tirelli | Los Angeles, CA | 1,020 | -6.0 | 2,445 |
| 246 | 241 | **Menasha** packaging, plastics, promotional graphics | Harold Smethills | Neenah, WI | 1,018 | -8.5 | 5,658 |
| 247 | 405 | **Yates Cos** commercial construction | W Gully Yates Jr | Philadelphia, MS | 1,016e | 36.7 | 4,100 |
| 248 | 260 | **ClubCorp** manages resorts, golf courses & athletic clubs | Robert H Dedman Jr | Dallas, TX | 1,015 | -5.1 | 23,000 |
| 249 | 307 | **Hobby Lobby Stores** hobby & craft stores | David Green | Oklahoma City, OK | 1,015 | 12.2 | 15,000 |
| 250 | 275 | **Printpack** makes candy wrappers & other flexible packaging | Dennis M Love | Atlanta, GA | 1,015e | -1.1 | 3,900 |
| 251 | ■ | **Agrilink Foods** produces & markets frozen vegetables | Denis M Mullen | Rochester, NY | 1,011 | -12.0 | 4,000 |
| 252 | 285 | **Boscov's** department stores | Kenneth S Lakin[21] | Reading, PA | 1,010e | 1.0 | 12,000 |
| 253 | 330 | **Rudolph & Sletten** contractor for high-tech & biotech facilities | Allen Rudolph | Foster City, CA | 1,002e | 17.6 | 800 |
| 254 | 366 | **Crowley Maritime** marine transport, harbor & barge svcs; logistics | Thomas B Crowley Jr | Oakland, CA | 1,001 | 26.7 | 3,800 |
| 255 | 269 | **Primus** wholesales plumbing, HVAC & electrical prods | Richard W Schwartz | Dayton, OH | 1,001 | -3.8 | 3,195 |
| 256 | 215 | **Connell Limited Partnership** recycles aluminum; diemaking tools; heat-transfer prods | Francis A Doyle | Boston, MA | 1,000 | -16.0 | 1,700 |
| 257 | 212 | **Swagelok** valves, tube fittings & other fluid-system parts | William R Cosgrove | Solon, OH | 1,000e[2] | -17.0 | 3,000 |

■ Not on last year's list. e: Forbes estimate. NA: Not applicable. [1]Pro forma figure. [2]Company provided estimate. [3]Worldwide figures. [4]Excludes public subsidiaries. [5]Reflects divestiture c consulting unit. [6]Doug Meijer is co-chief executive. [7]M Jude Reyes is co-chief executive. [8]Thomas G Wake is co-chief executive. [9]Formerly known as SC Johnson Commercial Markets. [10]Reflects acquisition of DiverseyLever. [11]Formerly known as Allied Worldwide. [12]Reflects North American Excel Communications acquisition. [13]Thai Lee is co-chief executive. [14]Robert J Gallo is co-president. [15]Excludes excise tax. [16]Jay M Davis is co-chief executive. [17]Raymond R Sackler is co-chief executive. [18]Formerly known as AIE Resources. [19]Barry Haber is co-president. [20]Formerly known as Heafner Tire Group. [21]Albert Boscov is co-chief executive.

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| 24 | MBM |
| 242 | MCCARTHY BUILDING COS |
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| 5 | PUBLIX SUPER MARKETS |
| 132 | PURDUE PHARMA |
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# Rebuilding Faith n Corporate Governance

by Judith Turnock

## Diversity Promises Fresh Approaches

The collapse of a number of high-flying merican corporations, followed by restated financials of far too many other respected companies, has made investors around the world jittery. Just look at the stock market, the world's safe "bank," which cannot seem to recover, despite a slew of new regulations and laws.

Confirming this loss of confidence is a recent nationwide survey of jurors in civil cases conducted by DecisionQuest for the Minority Corporate Council Association. Very large majorities of respondents agreed that:

- corporate failures revealed so far are merely the "tip of the iceberg" (76%)
- companies are likely to hide the truth about problems unless or until they are forced to reveal them (85%)
- senior executives were the most likely corporate employees to lie about the company (52%).

Radical changes are needed to reverse these depressing public perceptions. It makes sense to begin with those legally responsible for corporate governance — the corporate directors and senior executives. Now under enormous pressure to put their houses in order, they need bold strategies to renew investor trust to restore confidence in their organizations.

It is the time to bring in "fresh blood," says Connie Duckworth, who heads the Board of the Committee of 200, the nation's premier membership organization of corporate and entrepreneurial executive women. "Opening up the boardroom to women and people of color can hardly make things worse and will probably make them better. In crisis often lies the opportunity for positive change."

In addition, fresh blood on corporate advisory boards and at all points where a company connects with its consumers, such as marketing, advertising and franchising,

can increase diversity and the bottom line simultaneously. Here are opportunities tailor-made to increase diversity in corporate governance.

### Opening Up the Boardroom

Corporate women and minorities possess an "outsider" status that is now an advantage for corporate governance. They have little vested in the traditional business relationships among and between executives and board directors. In addition, many have decades of corporate executive experience. Observes Trey Reynolds, managing director of The Directorship Search Group, one of the nation's leading board search firms, "More and more companies honestly believe board diversity is important. And as more and more women and minorities are progressing up the corporate ladder, there are more and more good candidates."

A vast new pool of men and women are in fact prepared and available to serve. They bring the promise of new perspectives, new ideas, new relationships and new transparency. Providing the opportunity for all talented people to excel has always been the strength of our dynamic economy. Why exclude the boardroom from those advantages? Committee of 200's Duckworth reasons, "to exclude more than half the population from consideration for board membership is to go to a very limited well for talent. This is not only bad business judgment. It defies common sense."

### Two Forward-Thinking Companies: Freddie Mac Land Rover North America

This special report features the trend-setting dive achievements of two respected organizations. Governm chartered but shareholder-owned, Freddie Mac has a force of about 4,000 and holds a loan portfolio just shy o trillion, representing 20% of the total U.S. mortgage mar packages these mortgages for trading on the seco market. Freddie Mac's mortgage packages carry the hi investment credit rating, and its growth in shareholder re has averaged 19% annually for the last ten years. Freddie is regularly cited in the business media as one of the managed companies as well as one that is diversity-frien

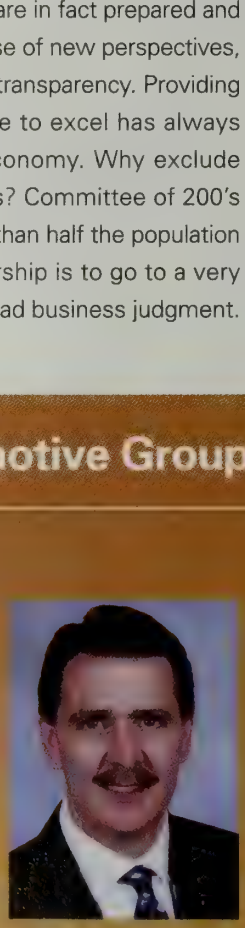
Land Rover North America imports and distributes F Rover, Discovery and Freelander vehicles manufactu Solihull, England, for sale in the U.S., Canada and Mexic North American headquarters is in Irvine, Calif., with oper in Mahwah, N.J., and Lanham, Md. Land Rover's Disc combines innovative design, off-road capability and all-a competence. The Range Rover remains virtually unchallen the full-size class, and with its first premium, small sport vehicle, the all-new Freelander, Land Rover continues tradition of producing multipurpose, go-anywhere vehicle withstand the most rugged conditions. Almost 2 millio wheel-drive vehicles have been produced by Land Rover wide since the original model in 1948. Land Rover is deter to build its North American sales substa through appeals to the diverse U.S. market.

### Board and Senior Executive Diversity

Success in diversity cannot be achieved w clear, convincing and oft-communicated su from the top, backed up by action. One of the important displays of commitment is the m of board members and senior executives. those slates are all filled by white men, it is d if not impossible to convince ambitious w and minorities they have a fair shot at real su there. High-potential women and minorities those companies at a much higher rate white men, and word gets around quickly. the most desirable recruits choose jobs elsev Corporate America is learning these lessons

Freddie Mac displays that visible div commitment and thus gains advantage war for talent. Freddie Mac's 18-member b among the most diverse of the nation

## Ford Premier Automotive Group



"We have developed a Diversity Advisory Council composed of both company leaders and outside leaders to focus on the benefits of a multicultural workplace, and to expand that agenda beyond human resources to the marketing, advertising and franchise aspects of our business. We are committed to being a company that reflects the changing demographics of the U.S. population."

**— Mike O'Driscoll, President**
Aston Martin Jaguar Land Rover North America

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corporations, with two minority men and three women, one of them Hispanic (28%). In addition, of its 29 executives with the title of senior vice president or higher, there are five minority men and three women, one of them Hispanic (28%). Land Rover's groundbreaking diversity efforts through its Diversity Advisory Council are placing it in an excellent position to meet future challenges across the full spectrum of its business.

The personal involvement of senior executives in diversity initiatives not only effects policy changes; it produces a more diversity-friendly work environment. It changes corporate culture for the better. The most successful corporations are on this trend-setting path.

### Freddie Mac's "Champions of Diversity"

"Champions of Diversity" is Freddie Mac's four-phase company-wide program, says Keith Earley, vice president of employee strategies and practices. "It is designed to achieve alignment among all our diversity programs as well as clarity about the business imperative." The vice chair and his direct reports meet regularly as a group for awareness training conducted by internal and external facilitators. The vice presidents who run departments within the 15 divisions attend similar sessions and frequently are joined by senior executives, who give their perspective and reiterate their support. All managers receive similar group training, and computer-based training modules reach every other employee.

"Because of our public purpose," says Earley, "we att passionate and committed workforce. Diversity augment enhances our mission. We enjoy diversity success anc high employee morale."

### Land Rover's Diversity Advisory Council Incl Outside Business and Civic Leaders

In March 2002, Ford's four European marques, Aston M Jaguar, Land Rover and Volvo (which comprise Ford's Pr Automotive Group), established a new, combined Div Advisory Council headed by Julian Bond, chair of the N Board. Nine other outsiders join Bond on the Co representatives of the Asian-American Chamber of Comm the Hispanic Association on Corporate Responsibility, *Enterprise*, *On Wheels* and *Latina* magazines, and the Na Association of Minority Automobile Dealers.

These outside advisors, working with ten inside mer including Mike O'Driscoll, president of Aston Martin J Land Rover North America, provide guidance on a wide v of business issues, especially marketing, advertising, h resources and franchise development. By targeting incr workforce diversity as well as diversity among service ve and franchisers, Land Rover is repositioning itself to co quickly with a vast market of well-heeled new consu Inviting outsiders to advise on internal strategy opens th to changes that transcend normal organizational proce

Land Rover's initiative is on the cutting edge of sity programs because it combines an intern an external perspective.

The Council meets quarterly and has already an increase in the diversity of advertising anc keting firms hired. The personal involvement of most senior executives ensures that the Co guidance will continue to translate into action.

Strategies to increase diversity in the b room and among senior executives can be r implemented, and there are now comp business reasons for doing so dramaticall immediately. Turning to people of color and w is a relatively simple and straightforward strat breathe new life into the traditional patte corporate governance and to break the log distrust and suspicion.

---

Judith L. Turnock, an executive coach, is co-author of *C the Corporate Code: The Revealing Success Storie African-American Executives*, to be published American Management Association in March 2003. S be reached at 212-222-3206, jlthmg@aol.com.

## Freddie Mac

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**— Leland C. Brendsel**
Chairman and Chief Executive Officer

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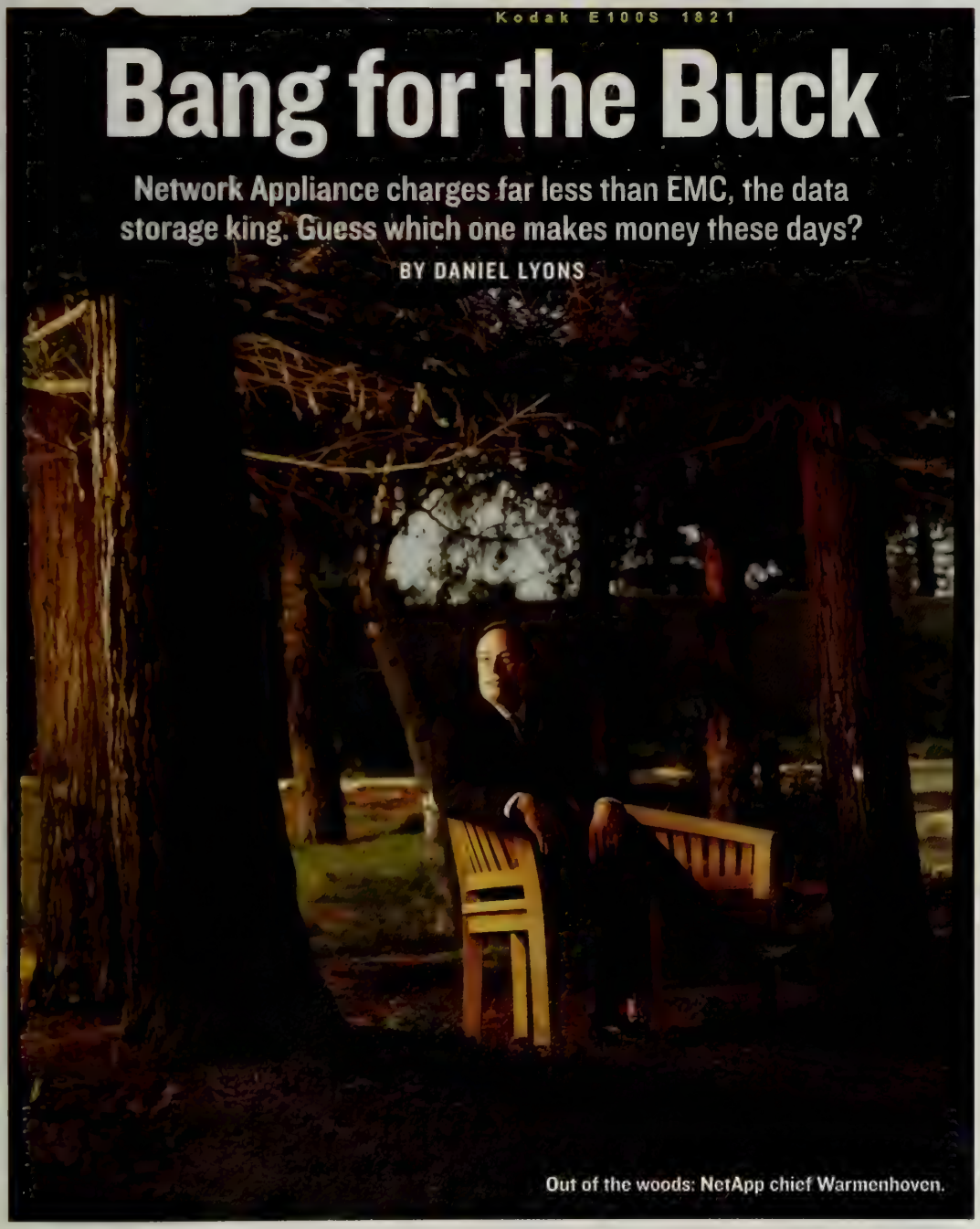



# Bang for the Buck

**Network Appliance charges far less than EMC, the data storage king. Guess which one makes money these days?**

BY DANIEL LYONS

Out of the woods: NetApp chief Warmenhoven.

SMACK IN THE MIDDLE OF THE TECH BUBBLE, DANIEL WARMENHOVEN WAS OFFERING CUSTOMERS an astounding proposition: His company, Network Appliance, could deliver data storage devices that cost one-third of what they paid for gear made by EMC Corp., the storage leader. Even more astounding was the fact that nobody cared. "One guy just interrupted me in the middle of a presentation and said, 'Stop! I don't care about low cost! Cost is not the issue!'" recalls Warmenhoven, chief executive at Network Appliance, based in Sunnyvale, Calif. The customer asked him to leave.

In these penny-pinching days after the crash, Warmenhoven's low-cost boxes suddenly look a whole lot better. That guy who tossed Warmenhoven out of his office? "Today he's a customer," he says. That helps explain why scrappy little Network Appliance—"NetApp," as the company is known—this year could pass $80 million in net income on 11% growth in revenue to almost $900 million, according to a forecast from Merrill Lynch. The firm figures EMC, in sharp contrast, will post a net loss of $188 million as sales decline 32% to $5.2 billion.

NetApp, whose stock trades in the $9 range, down sharply from a 52-week high near $28, is reaping returns on a big change in the way companies store data. Instead of attaching storage boxes directly to individual servers—EMC's traditional approach—companies now favor connecting storage boxes to a network, so that any server can fetch data from any storage box. Last year this "networked storage" represented about one-third of the $24 billion worldwide storage market. By 2006 sales in the overall storage market will hover at about the same level, but networked storage will make up two-thirds of the market, as sales grow 17% annually to $16.5 billion from just under $8 billion last year, research firm Gartner predicts.

By 2006, Warmenhoven avers, the power will have shifted in storage as NetApp slowly wrests market share away from bigger rivals like EMC, Hitachi Data Systems and IBM. In the end, he says, EMC will dominate only a single tiny segment: storage for mainframes. "We will push them back into a corner," he vows.

**"We're getting IN FRONT OF CUSTOMERS who wouldn't talk to us."**

EMC still towers over NetApp, even in the world of networked storage. But the giant is hurting. Its sales of server-attached boxes are declining, bruising revenue. Over the past five quarters EMC has lost $499 million. In the past two years it has laid off about 7,000 employees, reducing its work force by 30%. Gross margins have plunged from almost 60% to just 40% as EMC slashes prices to keep from losing deals.

It still isn't enough. Weiser Lock, a $100 million (sales) company in Tucson, Ariz., unplugged two EMC Symmetrix boxes in July and replaced them with a NetApp machine. The issue wasn't the price of the boxes but the cost of running them. "EMC was charging us $80,000 a year for maintenance. NetApp is charging us $30,000 for three years of maintenance," says Tom Mendelboim, netwo manager at Weiser.

Two years ago 70% of NetApp rever came from dot-coms and other techi blue-chip accounts in other industr stayed away. Today 60% of sales co from customers in financial services, federal government, telecom, energy a manufacturing, including Citigrou ExxonMobil, Ford, General Electric, Ge eral Motors and Merrill Lynch.

"All the oil companies, all the financ services companies—they were all E customers, and now they're using NetA too," says Warmenhoven, a genial 51-ye old who studied electrical engineering Princeton and started his career design networking gear at IBM. "We've had opportunity to get in front of custom who wouldn't talk to us before."

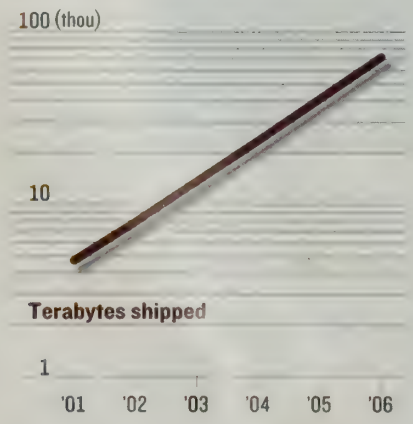
The key to NetApp's success: Thi small. EMC is known for big, high-e storage boxes that cost upwards of million; NetApp's small "filers" cost as tle as $15,000. Customers can buy a few start and eventually cobble together hu dreds or even thousands.

EMC used to deride NetApp's boxes mere toys, unable to store vast amou of data and poorly suited to runni databases, a key corporate use. Not anymore. And filers are startlingly sim to run. Broadcom, a $1 billion chipmak needs only two part-time people to ma age 120 terabytes of data (a terabyte

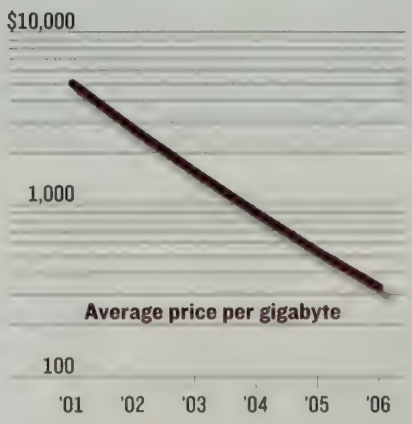
## Sprinting Just to Stay in Place

Storage was supposed to be the one technology sector immune from recession. Not so.

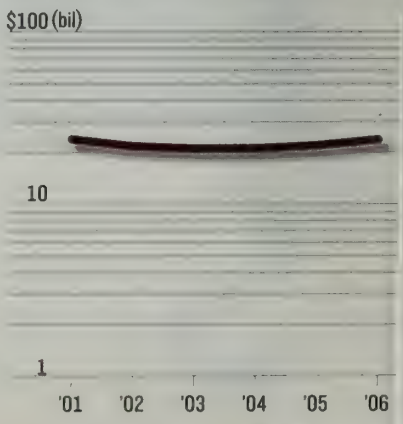
**Storage capacity shipped is growing 72% a year . . .**




**. . . but the price of storage is plunging 42% a year.**




**As a result, worldwide spending on storage will be flat through 2006.**

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1,000 gigabytes) on NetApp filers. "The total cost of ownership is unbelievably low," says Kenneth Venner, chief information officer at Broadcom, in Irvine, Calif. (A caveat: NetApp uses Broadcom chips in its filers.)

Earlier this year Deutsche Telekom started using NetApp filers and caching devices to build the world's largest streaming video system, delivering movies on demand to 45,000 households. The system holds 20 terabytes of data.

Yahoo, the Internet company, uses NetApp boxes to store more than a petabyte (1,000 terabytes) of data generated by 150 million users of Yahoo e-mail. Oracle, the database giant, uses NetApp to manage 300 terabytes of data and offers NetApp filers to customers who buy its new distributed database. Some 26% of NetApp's sales now come from database applications, compared with 16% a year ago.

Southwest Airlines uses NetApp filers to run almost every aspect of its business, including systems that are critical to keeping planes in the air. Southwest chose NetApp in part because it costs less than EMC and other major storage vendors and offers performance that in some ways exceeds EMC's. "We spent a lot less and we got a lot more," says Richard Hulsey, a system design engineer at Southwest.

NetApp's filers are ordinary Intel-based servers running special software that makes them good at storing and retrieving. A filer's brain consists of a single circuit board running NetApp's Data OnTap operating system instead of Windows. Now Windows, too, is aiming to run storage devices (*see box*).

Traditional storage devices like the ones EMC makes are more complex. They start with an array of disk drives and use specialized controllers and a memory cache to move data in and out at high speeds. They handle data at the "block" level, which gives them an advantage in handling databases. NetApp's machines traditionally dealt with data at the "file" level. That has hurt them at times. Microsoft would not certify NetApp machines as a platform for its SQL Server database and Exchange e-mail system until recently, when NetApp developed the ability to handle data at the block level, too.

**Yahoo uses NetApp boxes to store MORE THAN A PETABYTE of data.**

NetApp's filers also have lagged behind EMC in speed. That's because NetApp filers clip onto an ordinary Ethernet network that connects PCs and servers, in a scheme known as "network attached storage" (NAS). EMC and others use a faster "storage area network" (SAN) arrangement in which each storage box is connected to each other by high-performance Fibre Channel switches, which move data at up to 2 gigabits per second.

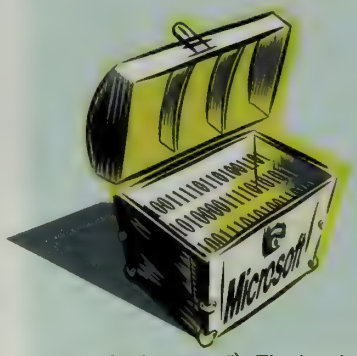
NetApp's drawback is disappearing because new forms of Ethernet can move data at speeds of 1 to 10 gigabits per second. Also, a new NetApp box can run in a SAN configuration, just like an EMC box, but at one-third the price.

EMC laughs off any threat from NetApp, saying NetApp has neither the expertise nor the resources to build SAN systems for customers. EMC, based in Hopkinton, Mass., is betting its future on software, developing programs to manage all of a customer's storage equipment, even boxes from such rivals as Hitachi, HP, IBM and NetApp.

But for now customers seem more interested in saving a few bucks, and their miserly ways are bad for EMC—and great for NetApp. No wonder Warmenhoven smiles a lot. He is one of the few guys to find an upside in the ever-lengthening high-tech depression. F

## The Next Challenge

Even as NetApp attacks EMC from below, it is being chased by an unlikely rival that makes an even lower-cost solution: Microsoft. For two years the Redmond, Wash. giant has been pushing a version of its Windows operating system tweaked with extra features for running storage devices. It's all part of Microsoft's plan to put Windows everywhere, from TV set-top boxes to handheld devices and cell phones.




And why not? Storage devices like the ones NetApp sells are basically regular Intel-based computers with a bunch of disk drives attached. Instead of using Windows, NetApp runs its own operating system, called Data OnTap. Microsoft has asked NetApp to drop OnTap and use Windows, but NetApp won't do it.

No matter. Microsoft today sells its Windows-based storage software as a kit to more than 20 server makers, including Dell, HP and IBM. They call it Windows Powered NAS (meaning "network attached storage"). The hardware companies load Microsoft's code onto Intel servers, add their own software, attach some disks and produce a box that Microsoft claims costs, on average, less than half what NetApp charges.

Continental Airlines chose Windows-based storage boxes made by Compaq (now HP) in part because they were low-cost and easy to manage—you just use the same programming tools you use with all your other Windows servers, says Eric Craig, director of technology at Continental in Houston.

Microsoft and its allies now hold 44% market share (by units) in the NAS market that NetApp pioneered. In dollars Microsoft's share is only 14%, a reflection of its lower prices. NetApp, by contrast, has 35% share of dollars but only 6.5% of units shipped. EMC, the most expensive storage player, gets 41% of NAS dollars on only 1.4% of units. —*D.L.*

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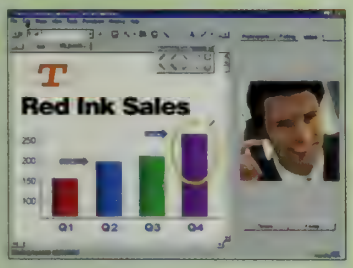


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# Dialing for Dollars

**Wooing software clients for million-dollar deals over a round of golf is a distant memory. The new pitch has a smaller price tag and a distinctly unglamorous setting: over the phone.**

BY NICOLE RIDGWAY

Leave no voicemail box untouched: telephone sales reps at a Veritas call center in Heathrow, Fla.

ON A MUGGY OCTOBER MORNING, 65 sales reps at a call center near Orlando, Fla. gear up for their twice-monthly "call blitz." Their employer, Veritas Software Corp., with $1.5 billion in revenue last year, sells applications for managing data storage. The group of reps—youthful, fresh-faced and outfitted in black, logoed polo shirts—convenes for a pep talk from the boss. The rep who snags the third-most leads that day will win a DVD player; the runner-up, a digital camera.

The grand prize: a $1,000 Bose surround-sound home theater system. The reps cheer and troop off to the phones as the boss issues his rallying cry: "Execute! Execute! Execute!"

Minutes later the room is abuzz, punctuated by the bang of a gong to signal the first catch of the day. Working a list of 1,500 contacts derived through e-mail and the Web, the team generates $3.5 million in leads by day's end. The Bose gear goes to Frank Santorelli, 45, who landed $445,000 in potential orders. He used to sell insurance at John Hancock. "I wouldn't wish selling life insurance on anyone," he says triumphantly.

Things have gotten a bit desperate in the once-turbocharged software industry. Worldwide sales will likely drop 6% this year, to $75 billion, according to Meta Group. Veritas faces a 1% revenue drop this year. When tech roared, veteran Veritas reps closed million-dollar deals over a ritzy round of golf. Now platoons of talkers eke out sales from a classy boiler room in Florida. Deal sizes average just $22,000.

"With this economy, you have to turn over every stone and look in every crack to find more money," says Jeremy Burton, Veritas' chief marketing officer, who masterminded the call blitz.

Oracle, BEA Systems, Adobe and IBM

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have all been upgrading their call centers from handling basic inbound service queries to waging highly charged sales efforts. In February BEA revved up its call centers into a major revenue generator. In late 2000 IBM linked its online store to its call centers, using the Web site to create leads. Oracle, which began cold-calling more than a decade ago with a 30-person team, now devotes almost half of its 2,300-strong North American sales force to telephone pitches. It hosts monthly global blitzes that reach up to 40,000 prospects and runs weekly product-specific pushes known as Shark Weeks.

"We continue to invest in tele-sales and reduce the number of field salespeople we have," says Oracle Chief Marketing Officer Mark Jarvis.

Economics strongly favors the shift to cold-calling. Field sales reps can rack up $1,000 to $2,000 a week in travel while visiting a mere ten clients. Bonuses and hefty commissions can amount to 5% to 7% of an order's value. Tele-reps make $35,000 a year and place 250 calls a week, without leaving their chairs.

That is, if they can get clients to stay on the phone. Telemarketers typically need to reel in a customer within the first 20 seconds, or the call is lost. Making it all the more difficult, corporate tech staffs' phones ring incessantly from an onrush of telemarketers.

Despite the pestering, Steven Finigian, a tech manager at environmental consultancy Condor Earth Technologies, prefers the tele-sales approach. It is easier to hang up on someone than to turn him away at the door, he says. A brief phone call wastes less time than 45 minutes in person.

The phone force has quotas to meet just as sales reps in the field do. At Veritas, the tele-pitchmen must log 15 hours of calls and reach at least 250 leads every week, and each call must last more than 20 seconds to be counted. That frees Veritas' field reps to clinch the deals the callers initiate and to go after bigger, more elusive fish.

Veritas' phone foray went into full swing after Burton, who had been at Oracle, joined the company in May. He was recruited by Veritas Chief Executive Gary Bloom, another Oracle alum. Burton brought along many of his old tricks. Soon after he joined, he set up Veritas' first call blitz, generating $11 million in leads. Four more blitzes since July have added another $14 million to the company's pipeline, as well as 1,000 hot leads for the field salesmen. So far roughly 40% of that $25 million may have accrued as revenue.

For the quarter ended Sept. 30, Veritas' sales hit $366 million, up 8% from a year earlier. Of that $14 million increase, 60% of it may have come from the Florida phone team, even as the number of $1 million-plus deals fell by 50% from the prior quarter. "We went from 18 big deals to 9. But at the same time, we exceeded revenue expectations," Bloom says.

BEA Systems' call centers are expected to generate $32 million in sales for the fiscal year ending Jan. 31. That will help BEA hold its expected sales decline this year to 6% instead of 10%, letting revenue come in at $914 million, according to consensus Wall Street estimates.

**"With this economy, you have to turn over every stone and look in every crack to find more money."**

Still, some firms have dropped the phone approach. Business Objects, whose software tracks business performance, shut its tele-sales operations in 2000 after eight years. The company switched its product lineup to broader software applications, and the reps were ill-equipped to explain all the intricacies over the phone. Customers preferred face time with a field sales rep before spending hundreds of thousands of dollars on software. "If you're into the stack-'em-high, sell-'em-cheap-type business model and the customer doesn't necessarily need a lot of convincing about what it is they're buying, then using tele-sales is fine," says Jonathan Temple, Business Objects' general manager for sales in the Americas.

Making tele-sales work requires training folks with little knowledge about software to speak the language of corporate tech managers. "Having a marginally trained person call up is not going to go down well with clients used to direct sales," says Mukul Krishna, an analyst at Frost & Sullivan.

Veritas puts its call center employees through five mandatory 90-minute training sessions a month, going over selling points on technical features, competitive products and hardware requirements. Burton got the marketing and sales departments at Veritas to create Web pages that outline a product's best points. A tele-salesperson and the customer can browse through the pages together over the Internet. When the technicalities get too sticky for the caller to handle, the next step is a three-way conference call with support staff.

Once businesses start buying software again, the hundreds of leads turned up by Veritas' gung-ho bunch in Heathrow could yield a new boom. "These sales guys who closed a $5,000 deal now," says a hopeful Jeremy Burton, "could be closing $50,000 deals later on." F

### ▶ By the Numbers

**20** Number of seconds a Veritas tele-sales rep needs to stay on phone for call to count toward sales quota.

**250** Number of calls per week to make quota.

**15** Number of hours talking on the phone per week to make Veritas' quota.

**$35,000** Typical salary for tele-sales work.

*Sources: Veritas; Meta Group.*

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# Smart Cart

YOUR OWN ROBOT: $599.99. THAT'S THE EXCITING come-on for the ER1 Personal Robot from Evolution Robotics, yet another company in Internet hype-master Bill Gross' erratic Idealab portfolio. It's enough to give you visions of an armored servant offering the guests canapes and champagne and vacuuming up afterwards.

The thrill may ebb a bit when you discover that what you get for your $600 is a box of aluminum and plastic parts and tiny screws that take about two hours to assemble—a step you can skip by paying $100 more. And even R2D2 might scorn the result: a low-slung battery-operated cart with two belt-driven front wheels and a freewheeling caster in back, plus a camera and a couple of USB connectors that hook up to the robot's sophisticated brain. You have to supply that: a standard Windows laptop computer, preferably one with a WiFi connection, that runs the ER1's software. What you end up with looks more like a laptop on wheels than any robot you've ever imagined.

But the combination can do more than you might expect. It recognizes words, sound levels, objects and even phrases in e-mails. It can move forward, backward, left or right and drive toward objects it recognizes. Using the laptop speakers, it can talk and play sounds. Its camera can record photos and videos and e-mail them for you. A grab-a-beer gripper arm ballyhooed at trade shows earlier this year is still not ready, though the company will let you order it for an extra $200.

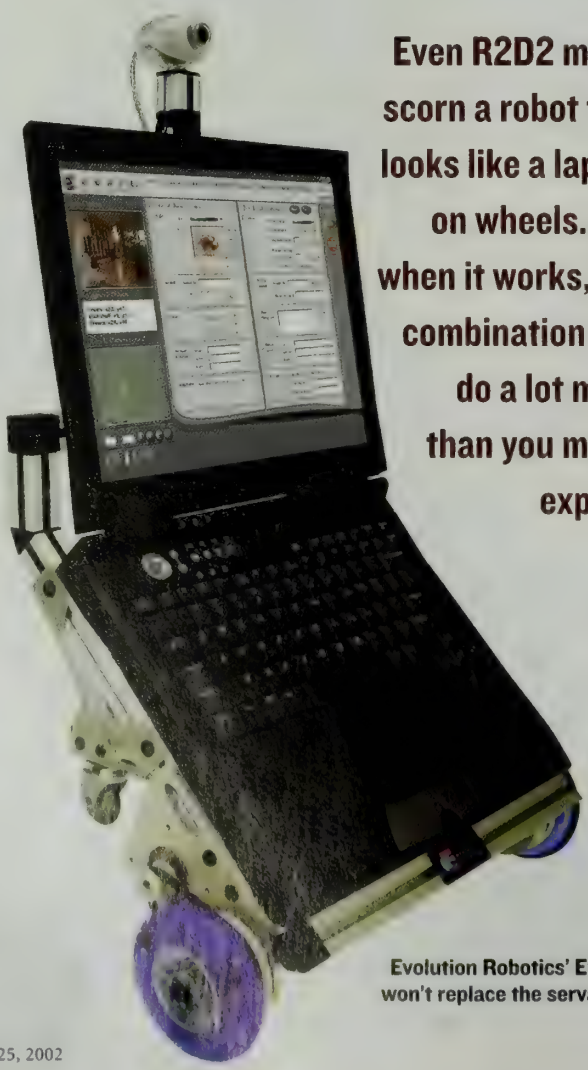
The software lets you control the robot with simple "if-then" programming whose results can be fun. For example, you can tell the system that if it hears a loud sound, it should play audio of a barking dog, spin around slowly and send a video of what it sees to your e-mail address. If you're lucky, you'll be able to figure out who stole your laptop and robot.

If the laptop lacks a wireless network, forget about using the robot's personal e-mail address and plan on spending time prone on the floor, awkwardly typing your commands on a nearly vertical keyboard—or somehow rigging the cables so that you can bring laptop to lap. WiFi lets you use a second computer to control the ER1 remotely, which is easier on the back.

In theory, you can control the ER1 from your office, but that may involve tricky settings to get around the firewalls at either end of the line—and clearly violates the documentation's urgent warnings that "The robot should never be left to operate unattended or unsupervised" and "you are assuming all risks for any damage to your laptop computer." Point well taken: Even when I was right there in the room, I nearly crashed the laptop's screen into an overhanging tabletop. ER1's imperfect collision detection needs an extra camera and USB port, neither of which comes with the package.

**Even R2D2 might scorn a robot that looks like a laptop on wheels. But when it works, the combination can do a lot more than you might expect.**

Schools would have great fun with this product if its fit and finish were improved. The camera was tilted off-kilter with no way to adjust it, the software required an upgrade not obvious on the company's Web site and, after fixing a show-stopping bug that the chief support technician was finally able to diagnose, the program still crashed repeatedly. Though object-recognition occasionally worked well—the unit could follow the box it came in like a needy puppy—it was maddeningly inconsistent. Thanks in part to heavy demands from the robot, the laptop's batteries drained in an hour or so, long before the ER1's did.



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Worst omission: a quick way of getting the unit to stop fast. For now, you have to get to the laptop or remote computer and click an onscreen stop button—an iffy proposition when the unit is rolling swiftly toward a staircase.

Yet despite all the catches, there's something fascinating about watching a mechanical device chase a $20 bill with the single-mindedness of a rapacious stockbroker. Just where is the boundary between humans and machines, anyway? F

HP Media Center PC: TV and computer meet again.

## PC TV: Encore Debut

HP's new Media Center PCs are hardly the first computers to come with TV tuners and TV-style remote controls, but they are the first to use Microsoft's new Windows XP Media Center Edition—a bunch of remote control and TiVo-like TV features bolted onto the bad old operating system and apparently intended for dorm rooms with space constraints. But the cutting-edge hardware is marred by glitches inherent in the phrase "Microsoft version 1.0."

For $1,999, sans monitor, you get just about everything you can think of in a fast Windows computer, including slots for just about any removable memory device you'll find in a digital camera or music player, plus a 5.1 surround-sound card that connects to a set of six speakers (and their inevitable nest of wires). Cheaper models cut speed, capacity and features; none includes a digital connector for monitors or a tuner for one of the most popular formats of all: radio.

The Media Center program and remote let you play DVDs, music, slide shows and TV from across the room. But the remote has trouble working with some DVD menus, and using it for slide shows and music limits you to material you've already arranged on the hard drive. Worse, it can't serve as a mouse, so you can't Web surf from your La-Z-Boy.

The system can't automatically adjust the monitor for optimal results, and it won't warn you if you try to turn off the machine when you have a TV recording planned. On awakening from standby mode to record a show, the unit produces a loud thump from the speakers—an unwelcome potential intrusion upon collegiate slumbers.

Just changing the TV display from full-screen to a smaller window occasionally wipes out the picture or sound entirely. The recorder can produce decent video at its best setting, but it looks awful on computer screens, particularly flat-panel models, thanks to problems with rescaling the picture to PC specifications.

Someday you may be able to burn DVD's from TV shows you've recorded with Media Center and play them back elsewhere. But PCs will need Microsoft's forthcoming Windows Media Player 9 Series, and the DVD burner will need new software that can convert the PC files into formats that DVD players can read—assuming copy-protection issues don't get in the way.

All of which means customers should hold out for the next version. F

Forbes Stephen Manes (steve@cranky.com) was cohost of *Digital Duo* and has been covering technology for nearly two decades. Visit his home page at www.forbes.com/manes.

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# How to Crash Well

## A new Mercedes is engineered to minimize injuries by preparing the car for impact.

BY JONATHAN FAHEY

Car crash survivors often talk about stopped time, as if the disaster happened in slow motion. That's a trick of the mind, but a surprisingly long amount of time does elapse between loss of control and impact. Engineers at Mercedes-Benz clocked that interval at half a second to five seconds in most crashes. Now comes a car, the new $73,000 S-Class sedan, that uses that moment to prepare for a safer smash. "Everything over a few hundred milliseconds is a really, really long time for us," says Roland Bachmann, senior safety engineer for Mercedes large cars. Sensors measure yaw (the nose swerving from side to side), understeer or oversteer (the car not going where the front tires are pointing) and braking pressure to gauge whether the car is out of control, and signal the car to make the proper adjustments. Further out: radar that sees a looming pole or guardrail and raises or lowers the entire chassis to take the blow better.

**BELTED IN**
Electric motors tighten the seat belts to remove slack in advance of a crash.

**BATTEN THE HATCH**
If sensors conclude a rollover is possible, the sunroof is closed to keep passengers in the car, and objects out.

**SEATING CHANGE**
Front and back passenger seats are adjusted to prepare for the blow. The front seat is moved upright, and cushions in the rear seat are moved up

PECIAL ADVERTISING SECTION

# Michigan

TATE OF INNOVATION

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## Michigan's NextEnergy Initiative s Power Charged

Vickery Eckhoff

When Michigan Governor John Engler unveiled the state's innotive NextEnergy initiative this past April, had one goal in mind: to make Michin a world leader in alternative energy chnologies. "Michigan will build it," he ys, "and they will come.

"This plan represents a turning point history because it will help reduce Amer-'s dependence on foreign oil, improve e environment and strengthen the econny," Engler says. "The heart of Nextergy is transforming our cluster of auto novation into a cluster of energy innovan. NextEnergy will power Michigan's ure."

Part of that discussion centers on the ernal combustion engine and the 0,000 jobs it generates in Michigan. As tomakers tell it, the future is fuel-cell chnology — an estimated $95 billion arket and one in which $4.5 billion in D has already been committed.

Although key to NextEnergy, fuel-cellwered cars are not the only focus. Nextergy is actively supporting development fuel cells for a range of mobile and stanary applications, in addition to solar, nd, hydro and other renewables.

NextEnergy's goal is to nurture innovan, strengthen collaboration and focus on g-term growth and job creation. Experts w sharing knowledge to be as imporit to growth as competition. Says Reg odlin, director of Environmental Energy nning for DaimlerChrysler and a member of NextEnergy's advisory committee, "We have to experiment with the marketplace and new products that are untried, and it has to be done right the first time. So we're all willing to work together."

Michigan's innovative alternative energy program includes business incentives, new academic curricula, a NextEnergy Advisory Council of industry leaders from around the globe, Demonstration Microgrids and an international NextEnergy conference. The nucleus of the initiative, however, is the proposed NextEnergyZone and NextEnergy Center.

Located within a SmartZone℠ in Wayne State University's Research and Technology Park, the NextEnergy Center will serve as a comprehensive clearinghouse and information resource on alternative energy technologies. "The Center will foster collaborative industry research and incubate alternative energy technology companies," says Doug Rothwell, MEDC president and CEO, one of NextEnergy's main architects. "Groundbreaking is planned for the end of this year."

Companies and start-ups located in the zone or across the entire state that are involved in the research, design or manufacturing of alternative energy technologies will benefit from substantial tax and regulatory incentives provided by the state. Already, a number of companies contacted by the Michigan Economic Development Corporation (MEDC) have expressed interest in establishing facilities there once the center's up and running next fall, given its proximity to the tremendous concentration of automotive companies and the large supply of technology workers.

**Top: DaimlerChrysler's fuel-cell-powered NECAR prototype vehicle. Bottom: Wind power is just one developing area for NextEnergy.**

Michigan is reaching beyond its borders in seeking participation and getting support. "NextEnergy underscores the need for state-level initiatives to support the development of this very critical form of technology," says Roger Saillant, CEO of Plug Power in Latham, N.Y., one of the nation's top fuel-cell suppliers and manufacturers.

Global interest is also high. The MEDC has been to England, Scotland, Ireland, Germany and Canada, all of which are investing heavily in alternative energy development. "We see collaborations with key regions around the globe in areas of common interest, such as curriculum development vital in the acceleration of this industry," says Rothwell. "This is clearly not just about Michigan. We hope to benefit the entire world." ■

NEXTENERGY

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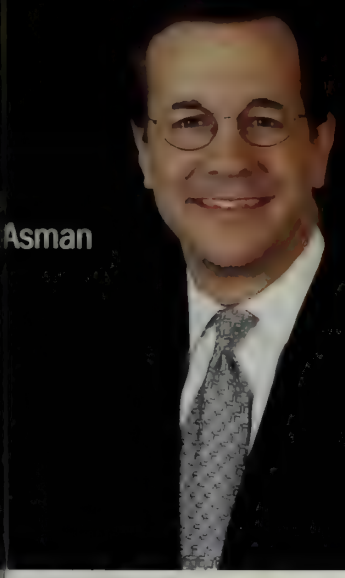


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# Unplugged

**Onvance created an in-store ad system that actually got shoppers to buy more Altoids, Coke and other stuff. Too bad its business plan was a mess.**

**Y EMILY LAMBERT**
**ND JOHN TURRETTINI**

IN THE SLOW-GROWTH WORLD OF Twinkies, Cheese Nips and Diet Coke, an amazing thing happened in 34 convenience stores in Denver in the first eight months of the year. Sales of toids mints at the stores jumped 4.9% a onth, on average. PowerBars, too, were ddenly in big demand, with sales levitat-g 6.2%. And Kit Kat candy bars practically swaggered to store registers, posting a 7.7% sales increase.

"Products were flying out of here," says Ronald Bell, a Conoco manager, marveling that some items were difficult to keep in stock. The cause: three new TV sets installed at the beginning of the year near store shelves, over refrigerated cases and by the cashier. The TV system, controlled by a fledgling company called Onvance, aired round-the-clock slick segments on local sports and weather, interspersed with copious bursts of 10-to-30-second commercials for products in the stores. Most shoppers were in stores long enough to see six ads.

**TV commercials go retail: Alan Slothower with the in-store system that blared ads—and moved products.**

It's easy to see why Nabisco, M&M/Mars, Frito-Lay, Coca-Cola and other marketers were sold. Most advertising runs in the wrong place—consumers

see it at home, rather than in the store. Onvance aired ads at the point of sale just as customers were already buying something. Better yet, the venue let marketers aim the ads at young men, a group that is maddeningly difficult to reach.

Another bonus: Unlike TV ads, which are easily skipped, the Onvance TVs couldn't be turned down—or turned off. The TV sets, placed in some 440 stores, were controlled by an elaborate high-speed satellite system provided by Hughes Network Systems. The satellites checked the sets at least once an hour to make sure they were still on.

Onvance was the dream of Alan Slothower, 36, a former auditor with Crown Central Petroleum, who was short on marketing experience and long on enthusiasm. When Crown's parent, Rosemore, and five other oil companies formed the venture in April 2001, he jumped at the chance to run it. The first customers would come from the combined total of 7,600 stores managed by his backers, which included Irving Oil, Suncor Energy, Warren Equities, Tesoro Petroleum and Conoco (now ConocoPhillips). The companies—each with a 12.5% stake in Atlanta-based Onvance—hoped to boost sales in the convenience stores alongside their gas pumps. They also wanted to woo more franchisees.

"We thought that might make our brand more attractive," says Carlton Adams, a spokesman for ConocoPhillips.

Slothower had even bigger ambitions. He aimed to sign up 2,300 stores by year-end and to add 4,700 more in 2003, and he wanted to expand beyond just captive stores to enlist independent chains, as well. He also pitched other revenue-building ideas to stores, including package-shipping kiosks. Though Onvance's revenue was but a trickle, he projected annual sales of $43 million by the end of next year, 60% from sales of commercial time and the remainder from monthly fees paid by the stores. By his estimate Onvance would be profitable in 2004. "This business was going to make it," Slothower says.

"It was a terrific idea, a real no-brainer," says Steven J. Farella, chief executive of TargetCast TCM, which sold ads for Onvance. But the startup had a relatively small budget: $16 million, to be doled out in increments only when Onvance achieved quotas for signing up a certain number of stores and advertisers. And Onvance was trying to succeed in a field littered with failures. Ted Turner's in-supermarket channel installed checkout-aisle TVs that advertised grocery items—never mind that few shoppers were willing to step out of line and head back to the aisles. The big 7-Eleven chain has a system of screens, but it's a silent network that also hawks items that are unavailable in its stores.

Undaunted, Onvance started soliciting sponsors and convenience stores in April 2001. The first big bang: a five-month, 25-store test in Raleigh, N.C. last fall. Four marketers signed on, including Frito-Lay and Coca-Cola Consolidated, one of the nation's largest Coke bottlers. They ponied up a total of $68,000. Although companies could provide their own commercials, Onvance also offered to create new ones for a fee.

In the test, monthly sales at the Raleigh stores rose an average of 6.8% to $76,900, outpacing the annual growth rate in the industry overall. That meant $1,400 a month on average in additional profit for each store. Sales of Coke instantly rose 11%, impressing Robert Hannah, a vice president at Coca-Cola Consolidated. But the price he paid to air the ads was "horrendous—$1,000 per store per month," he says. The incremental sales did not cover the cost of the ads, and he bailed out. "I couldn't afford it."

Moreover, some storekeepers apparently balked at the expense of installing the Onvance system, despite Slothower's tantalizing promise that extra profits would offset the outlay. The industry's sales are expected to grow by just 1% this year, and margins are sinking. The typical convenience store has annual in-store sales of $917,000, letting it eke out just $28,300 in pretax profit last year, down 31% in a decade, says the National Association of Convenience Stores. On that scale, Onvance was a pretty big gamble. A store had to pay $4,200 upfront to install Onvance, or pay for it in monthly fees that averaged $350.

Onvance had high prices in part because it had high costs. The company paid $6.4 million—40% of its original budget—to McKinsey & Co. as project consultant. (To preserve cash, Onvance paid half the sum to McKinsey in the form of a 50% equity stake, a setup that would cause a crisis months later.) From May to October of this year Onvance spent almost $4 million on content, travel and salaries for six executives and more than two dozen staff, and rent for the Onvance office and two corporate apartments in Atlanta. Onvance's revenue this year: a paltry $116,445.

Nonetheless Onvance had wired up 440 convenience stores in 25 states by the middle of this year, helped by the strong results in the Raleigh trial. In May, one of its peak months, Onvance says it pulled in $100,000 from major advertisers, including Pfizer and Interstate Batteries.

But the company was spending far more than it was taking in. That owes in part to how Onvance's owners set it up. Slothower confides: The benchmarks he needed to hit were based not on revenue targets but on the number of stores and brands he had landed. No wonder, then,

▶ On the Numbers

## Snack Central

**People buy a lot more than Cokes and smokes at convenience stores.**

**$283 billion** Convenience store sales in the U.S. in 2001.

**71 seconds** Average amount of time it takes customers to select an item in a convenience store.

**11.6 million** Slurpees sold by 7-Eleven every month. Favorite flavors: Coca-Cola and Minute Maid Cherry. The greatest number of Slurpees are sold in Winnipeg, Man.

*Sources: National Association of Convenience Stores; 7-Eleven.*

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that when stores and marketers started griping about Onvance's costs, Slothower granted steep discounts to get them on board—and to keep the money coming in from his backers. Onvance started picking up the cost of hooking up the system, shelling out $2 million for the stores it equipped. And for advertisers it slashed prices up to 80% in some cases.

By April of this year Onvance, with skyrocketing costs, was struggling, and the oil companies were reluctant to invest any more money. Then came a terrible blow: In June McKinsey & Co. moved to convert its equity stake into cash, demanding $3 million. One month later the oil companies told Slothower they wouldn't advance him any more money.

With $350,000 in the bank in August, Slothower cut his staff by 50% and filed for Chapter 11 reorganization. But old hopes die hard. He still believed he could build a viable, humming network of ad-blaring TVs in thousands of convenience stores, if only he could have a bit more time and money. He got a $900,000 loan from his backers and used much of it to search for additional investors or a buyer. Slothower hired investment bank Matrix Capital Markets Group to shop Onvance. He also paid $10,405 in cash for a promotional booth at a national convenience store trade show in October, thinking he might attract more stores or an acquirer.

He didn't get the chance to try. Onvance's six oil-company owners pulled the plug in October, demanding it repay the $900,000 loan before it doles out $1.7 million owed to creditors. Onvance converted its Chapter 11 filing to a Chapter 7 liquidation on Oct. 24.

"It's a huge shame," says a defeated Slothower. He is now job hunting from his Atlanta home. But the flop has left something behind for Onvance-equipped stores. The TV sets still blare away, airing programming and product pitches until it's decided how Onvance will divvy up some $2.3 million in assets. The in-store fare seems to have a pacifying effect on customers in crowded stores. Instead of grumbling while they wait in line at registers, they now stand quietly and watch TV. F

# Reality Bites

## *Rolling Stone* adopts a new attitude to woo advertisers and readers. Some aren't sold.

**BY ALLISON FASS**

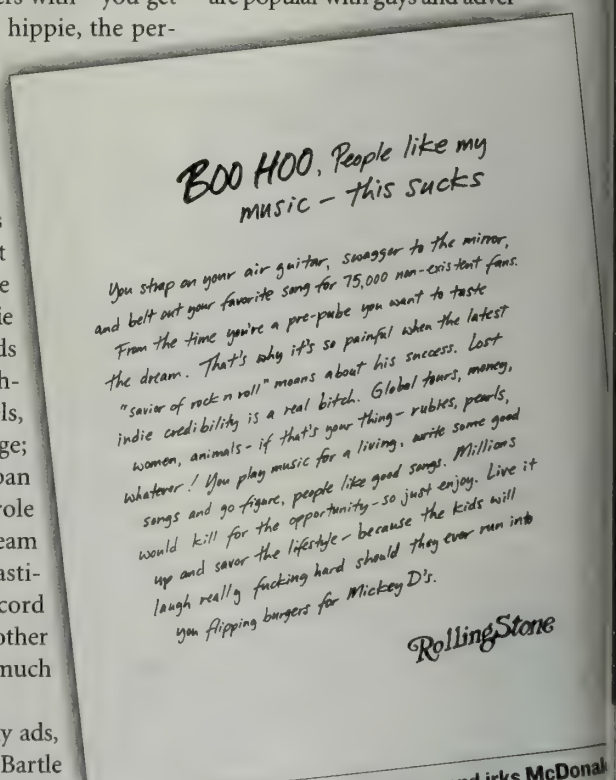
FOR ALMOST A DECADE *ROLLING Stone* magazine used a clever, effective ad campaign to tell Madison Avenue that the way to reach educated, well-to-do baby boomers was through its pages. The "Perception/Reality" pitch ran until 1994 and contrasted marketers' perception of its readers with—you get it. One ad featured a hippie, the perceived reader, juxtaposed with a yuppie.

Now the venerable title, which celebrates its 35th anniversary this month, sends a sneering, irreverent message in profane print ads. "Live fast, die a senior citizen," reads one. "Drugs, debauchery, trashed hotels, women half your age; today's flash-in-the-pan rock star needs a role model to keep the dream alive!" Another sarcastically bashes the record industry for, among other things, charging too much for compact discs.

The stark, text-only ads, created by ad agency Bartle Bogle Hegarty, appear as handwritten notes to rock musicians and the music business. And at times they go too far. One ad blasts rockers for grumbling about the burdens of success: "Live it up and savor the lifestyle—because the kids will laugh really f***ing hard should they ever run into you flipping burgers for Mickey D's." (The asterisks are ours.)

Whoops. McDonald's, miffed at that reference, isn't advertising in the magazine for the balance of the year. And the burger behemoth is reconsidering a planned multipage deal for 2003. So much for the new reality.

The snarky trade campaign is a reaction to dire times. *Rolling Stone*, a biweekly owned by Wenner Media, has been battered by the ad drought and competition from, among others, British-style "laddie" magazines, such as *Maxim* and *FHM*, that are popular with guys and advertisers. Ad pages sank 19% last year and sagged another 6% through this September, says Publisher's Information Bureau. Newsstand sales, meanwhile, were down 15% for the first half of the year. No wonder there's a redesign to woo readers and a new managing editor: Ed Needham, formerly of *FHM*. But is the new ad effort working? *Rolling Stone* says it had 112 ad pages in the Oct. 31 issue, up 43% from the same issue last year—but then, those ads were sold before its new campaign debuted. F


BOO HOO. People like my music – this sucks

You strap on your air guitar, swagger to the mirror, and belt out your favorite song for 75,000 non-existent fans. From the time you're a pre-pube you want to taste the dream. That's why it's so painful when the latest "savior of rock n roll" means about his success. Lost indie credibility is a real bitch. Global tours, money, women, animals – if that's your thing – rubies, pearls, whatever! You play music for a living, write some good songs and go figure, people like good songs. Millions would kill for the opportunity – so just enjoy. Live it up and savor the lifestyle – because the kids will laugh really fucking hard should they ever run into you flipping burgers for Mickey D's.

Rolling Stone

**Oops: This ad blasts spoiled rockers—and irks McDonald's**

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# ACT 2, SCENE 1

## Party City nearly imploded the first time around. Now, at last, there's something to celebrate.

BY LEIGH GALLAGHER

HALLOWEEN IS ALWAYS A SCARY time for James Shea. October is when the 475-unit Party City Corp. generates 22% of annual sales—nearly $100 million worth of gory rubber masks, fake bloody body parts and cardboard coffins, not to mention last-minute orders for Britney Spears look-alike costumes. And Shea, who took over as chief executive when the chain was reeling in late 1999, knows what it's like to come back from the dead.

Founded in 1986 by Steven Mandell, a driven, grow-at-all-costs builder who had been a relentless party-supply sales rep, the company expanded like a mutant virus, opening 150 stores by 1995. Wall Street loved the idea of a category killer—a single source for birthday party plates and hats, as well as Bride-of-Frankenstein costumes. Going public in 1996, Party City attracted franchisees, competitors and investors; its stock shot from $10 at the offering to $34 by March 1998.

Then, kaboom. While sales kept rising, headquarters didn't have the inventory-management and accounting systems to support rapid growth. By March 1999 the company stunned investors with news that it couldn't complete its year-end audit for 1998 because it couldn't calculate its inventory. By April the stock had fallen to $3, and by July it was delisted from Nasdaq trading. The founder resigned, and board member and former Pathmark chairman Jack Futterman took over as interim chief executive. By the time it completed the 18-month audit for January 1998 through July 1999, it reported a $12 million loss on sales of $450 million.

It was down literally to its last few dollars in cash, and bankruptcy loomed. Even franchisees bought company-owned stores to keep things afloat. A major shareholder—Sidney Craig, husband of Jenny Craig, whose sons are franchisees—set up a meeting with Michael E. Tennenbaum, Los Angeles-based investor and former Bear Stearns vice chairman of investment banking, to rescue Party City. "It was a horror story—I should have brought an airsick bag to the meeting," says Tennenbaum. "Here was a business that had great profit margins and was destroying its competition. And yet the company was insolvent."

Party City was in violation of its bank covenants, its suppliers were demanding payment in advance and its books were so messy they couldn't give Tennenbaum monthly gross margin figures for individual stores. But he was intrigued enough to order an analysis, and a few days later he agreed to organize a round of funding. He lent $12 million to the company and persuaded Goldman Sachs and a unit of liquidator Gordon Brothers to join him, providing a total of $37 million in exchange for notes bearing interest at 12.5% and 14%, and warrants to acquire 6.9 million shares at $3 per share (later repriced to $1.07 per share). All told, the deal valued the company at $100 million—humbling compared with its $400 million market value a little over a year before. Still, enough cash to pay off creditors and place eleventh-hour orders for Halloween 1999.

A three-month search for a new chief dug up Jim Shea, then-president of housewares retailer Lechters and former merchandising executive at Dayton Hudson, May Department Stores and Eddie Bauer. In contrast to the voluble Mandell, who one Halloween appeared dressed as a king to promote the company on CNBC, Shea was so low-key as to seem almost dull. "He didn't have the fabulous résumé—he hadn't just saved Barneys," says Tennenbaum. "But he seemed really solid."

Some of the mess was cleared by the time Shea, now 57, jumped on board in December 1999. Vendors had been paid and new deals reached; a new chief financial officer was straightening out accounting. Shea focused on store operations, logistics and franchising—its 240 franchised

**Hardly a party animal: James Shea has still brought new life to a near-dead chain.**

TEEN & ADULT COSTUMES
KIDS' COSTUMES
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Fearsome Faces

units, 51% of the total, pay a 4% annual royalty—along with rebuilding inventory and point-of-sales systems and rethinking merchandise.

The stores needed a face-lift; customers found them too dark and difficult to navigate. Shea replaced overhead fluorescent lights with halogen ones and changed the layout from a supermarket-aisle design to a more circular orientation, organized by categories. He separated adults' and children's party goods and moved seasonal merchandise to the center of the store from the periphery. He added a luau section for Hawaiian-themed parties and an "inflation station" for helium balloons. Exploiting the fastest-growing area, Shea expanded the space dedicated to goodies for children's birthday parties and won exclusive rights to Crayola-branded party games and some Disney-themed Halloween costumes.

"We had to prove ourselves," Shea says simply. In the summer of 2001 Party City made it back onto the Nasdaq, a rare feat that Shea marked by a celebration at Nasdaq's headquarters, with models dressed in costumes. Since then the party chain has posted a 72% jump in earnings to $17 million, on healthy 7% growth in sales to $423 million, for the fiscal year ended June 29. Company-owned same-store sales climbed 5%. At a recent $10.33, shares are down from $17.60 in May but have crept up steadily from $1 since Shea's arrival.

**"It's still AN EXERCISE IN GLOBAL DIPLOMACY to bring in investors."**

Shea has begun wooing Wall Street, albeit reluctantly. "It's still an exercise in global diplomacy to bring in investors," says Gary Giblen, director of research at C.L. King & Associates, one of three analysts who cover Party City. "I'm sure that's held the stock back."

Little has held back Shea's ambition. He claims he can almost triple the chain's U.S. reach to 1,500 stores and grab an even larger share of the $13 billion market for party supplies—a market Wal-Mart and Target overlook, he says. About half of all party goods are sold through mass merchants, but because of low-ticket and high handling costs (Party City carries 15,000 items, with an average price of $2), they don't pursue the business all that avidly.

That leaves room for consolidation. Party City's main rivals are in sorry shape: Naperville, Ill.-based Factory Card Outlet, with 170 stores, emerged from Chapter 11 in April; 140-store Minneapolis-based Paper Warehouse was delisted from Nasdaq in June, but not before Shea scooped up 13 of its stores in the Seattle area.

When Goldman Sachs sold its 18% stake a few months ago, the buyer was one of Michael Tennenbaum's funds. It was a rare move for an early investor, paying $13.25 a share for Goldman's stake, far north of his $1-per-share initial investment. Says he: "We're either brilliantly brave or naively optimistic." F

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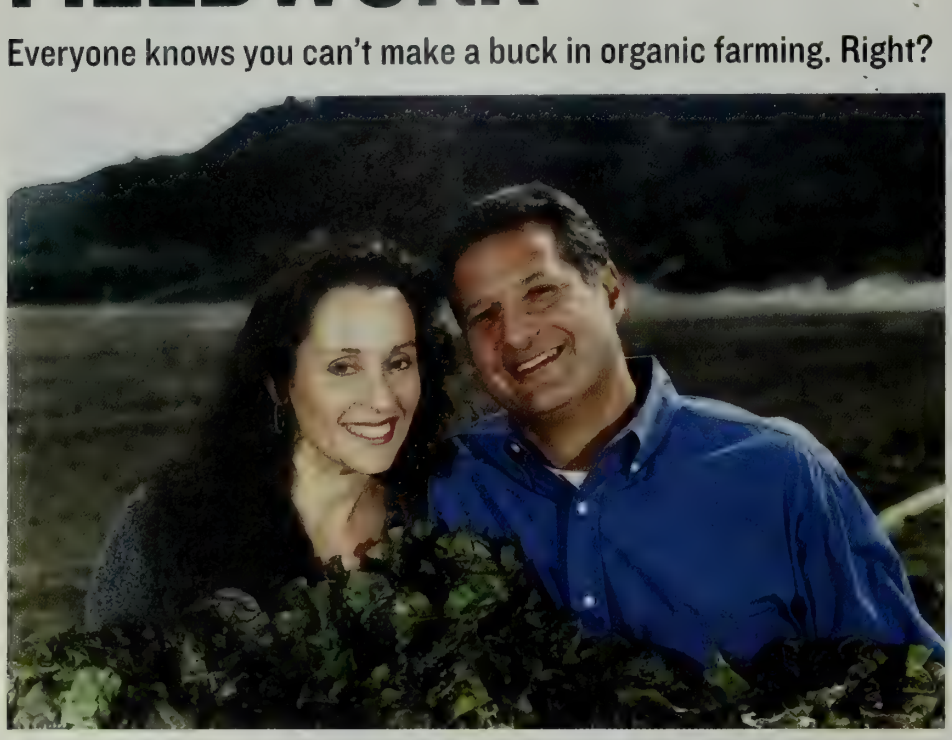
# FIELDWORK

## Everyone knows you can't make a buck in organic farming. Right?



Smiling much, saying little: Myra and Andrew Goodman may have solved a key organic riddle.

BY ALLISON FASS

ANDREW AND MYRA GOODMAN stumbled into organic farming 18 years ago. Both had moved from Manhattan to attend colleges in the Bay Area and later settled and got married while living on a 2.5-acre farm in Carmel Valley, Calif. In exchange for rent, they agreed to fix up the property. To earn money, these city slickers who knew nothing about agriculture began growing organic raspberries—without herbicides, pesticides or chemical fertilizers. "Organic just seemed—and I don't mean it to sound trite—it just seemed the right way," says Drew, now 42. And a tough way to get $12,000 in roadside sales and the rare restaurant score—working seven hours a day picking berries and another four or five under the sizzling sun hawking them.

Eventually the Goodmans got smart. They diversified their crops, found others to do the labor, discovered grocery chains, cut deals with bigger partners and rode the craze for organic foods, which is largely a triumph of perception over scientific evidence, since there is no proof that they are safer or healthier than conventionally produced edibles. Still, organic is a charmed category, growing five times faster than other foodstuffs and approaching $11 billion in annual sales. Today the Goodmans' produce is grown under the Earthbound Farm brand name on 11,000 certified organic acres in California, Arizona, Colorado, Oaxaca, Mexico and New Zealand. Natural Selection Foods, as their San Juan Bautista, Calif.-based company is called, hopes to pull in more than $200 million in revenues this year from the likes of Kroger, Wal-Mart and Whole Foods.

You'd hardly know they struggled for years as a tiny operation run out of their kitchen. Drew focused on sales and receivables, Myra worked on payroll, accounts payable and marketing. Buying a 32-acre farm in Watsonville and building a 9,000-square-foot packaging plant in 1989 represented a major leap forward. So did hooking Costco as a customer at a 1992 trade show (the giant retailer still gobbles up 10% of their annual produce). But the Goodmans' biggest break came in teaming up with Salinas, Calif.-based Mission Ranches, which has converted 6,000 acres to organic farming in exchange for a 50% cut of sales and Earthbound's marketing and processing services. Then Tanimura & Antle, also of Salinas, acquired a one-third stake in Natural Selection for more than $2 million, helping Earthbound gain access to what would become 15,000 acres, 75% of which is now devoted to organic produce. Scale and ownership make all the difference in this business, particularly since rents for organic land are 30% higher than for regular farmland.

But have the Goodmans cracked the essential riddle of organic farming—actually making a profit? Compared with conventional agriculture, organic farming is up to 40% more expensive, thanks to the added cost of compost, the extra weeding required and crops lost to bugs. Trouble is, you can't pass all of those costs to price-minded consumers. An 8-ounce bag of Earthbound baby lettuce costs an average $2.70 at the store, typically just 20 cents more than the same product created with the help of pesticides. Natural Selection says that once you back out the markups for distributors and grocery stores, it gets $1.13 a bag.

The Goodmans claim they are profitable, but refuse to break out their costs or confirm estimates. But an Earthbound farmer says the per-acre yield of its baby lettuce (the bulk of its sales) is 4,800 pounds, or 9,600 8-ounce bags, at $10,848. The per-acre operating cost of organic lettuce—water, seed, fertilizer, labor, harvesting, rent, utilities and marketing—can be estimated at $7,300, reports a small competitor. That leaves $3,548 for packaging and distribution, which runs an average $2,944 per acre. What trickles down to operating profits? An estimated $604 per acre. Some of that 5.6% margin has already been paid to farmers. The final 2.8% or so cut compares with 5.9% for publicly traded Dole Food, which has a tiny organic business. There's hope for the top line: With the recent U.S. Department of Agriculture-approved organic labeling, sales for companies like Natural Selection can only head north.

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# Protect your IRA

## Retirement account mistakes can be fatal and custodians flawed. So stay alert.

By Neil Weinberg and Matthew Swibel

IOWA CITY ESTATE LAWYER DEAN CARRINGTON RECENTLY advised a client in her 60s to revise the beneficiary form for her Vanguard Individual Retirement Account so her family could stretch out its income tax deferral, while minimizing estate taxes. The primary beneficiary would still be her husband, but the contingent beneficiary would vary, depending on which spouse died first. In a letter, Vanguard rejected the new form as "too complex." A manager of Vanguard's retirement resource center tells FORBES the fund company doesn't want to be on the hook for determining who died when, but will reconsider its decision.

It should. With IRAs making up a growing share of affluent families' financial assets, fancy estate and financial planning moves involving them are increasing, too. *(See box on p. 252 for one new idea.)* But, complains estate lawyer Carrington, the banks, brokers and mutual fund companies that act as custodians for $2.4 trillion in IRA assets are getting in the way. They aren't very tolerant of novel legal arrangements for determining payouts from IRAs.

We do have some sympathy for custodians. Despite the Internal Revenue Service's recent efforts to make IRA rules simpler and more humane, they're still complex and unforgiving of mistakes. The latest version of IRA distribution rules, issued in April, runs 154 pages.

Much of this mess stems from the fact that the law forces IRA owners older than 70½ to take money from their IRAs, whether

PHOTOGRAPHS BY NICHOLAS EVELEIGH FOR FORBES

they need it or not, and puts tricky limits on continued tax deferral by heirs. Miss a minimum required distribution and you'll get hit with a 50% penalty tax on the amount you should have taken; distribute an IRA directly to estate and your children lose the chance to stretch out its tax deferral over their own life spans.

So custodians are understandably wary of another layer of complications. Worse, account reps often misstate the law or strongly insist that something their employer just doesn't want to do is prohibited by law, says M. Sean Fosmire, a Marquette, Mich. attorney who runs the Web site ira-web.com.

That's what Indianapolis resident Douglas Johnson says happened after his father died suddenly of heart failure last year, leaving an IRA to Douglas and his brother. A Metropolitan Life rep gave him incorrect information about withdrawal options, and insisted he couldn't transfer the account to his own broker, complains Johnson, 50. It took threatening letters from an attorney to get the account moved. "Met Life was dragging its feet," Johnson says. Met Life declines to comment on Johnson's case, but says it processes transfer requests in four days on average once it receives all the required documentation.

Bottom line: The onus is on IRA owners to make the most of the rules, while avoiding the traps—both those in the law and those custodians create.

**BENEFICIARY BLUES**

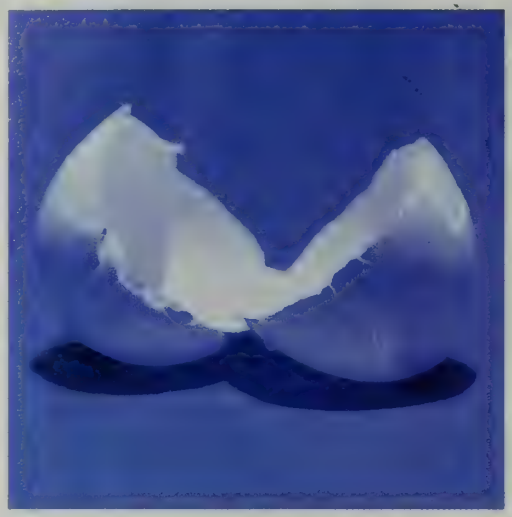
Your IRA beneficiary form is crucial, because the form, not your will, controls who gets your IRA. You can't skirt this problem by leaving your IRA to your estate. If you do, your heirs can't stretch out its tax deferral over their own lives; IRAs left to an estate must be fully distributed over five years. (Or, if distributions have already begun, over what was the projected life expectancy of the deceased.)

In the past, IRA owners typically named a spouse as beneficiary and left it at that. Before the IRS liberalized the rules last year, once you were older than 70½ you had little latitude to revise the beneficiary form anyway. Now you have more freedom, so take a new look. Consider adding children or grandchildren as contingent beneficiaries. If your spouse dies before you, or survives you but is wealthy enough to give up the IRA to the contingent beneficiaries (to "disclaim" it, in legal jargon), the kids or grandkids will be able to stretch out withdrawals over their own life expectancies.

When adding children, beware the following trap: One child dies before you do and the whole IRA goes to the others, meaning you've stiffed the offspring of the deceased child and possibly created a legal or family mess. You can avoid this (as well as avoid cutting out a child or grandchild born between the time you revise a form and your death) by using "to my descendants per stirpes." That legalese means: If a beneficiary dies, his descendants get his share. Fidelity introduced per stirpes as an option on paper forms this year, and Vanguard will next year. Unfortunately, some custodians, such as MBNA Bank, still reject per stirpes designations.

If a custodian's standard beneficiary form doesn't suit you, your lawyer can write an attachment or a whole new form. Dodge & Cox does not offer per stirpes on its standard form, but will accept it on a custom-written form. Here again, policies vary. Fidelity won't consider custom-written forms unless you have at least $100,000 invested with it, and then the form must still comply

# The Charitable Stretch



Leave your IRA to a charitabl remainder unitrust (CRUT) an your heirs and your favorite char ity can end up better off. Univer sity of Missouri at Kansas City la professor Christopher R. Hoyt de signed this maneuver to solve th problem some families have i stretching out the tax deferral o an IRA left first to a survivin spouse and then, at his or he death, to children. But it isn't fo everyone, he cautions.

Normally, the best way f stretch out deferral is to leave you IRA directly to your spouse. Sh (assuming the husband dies first) rolls it into her own IRA and, at her death, leaves i to the kids, who can split it into separate inherited IRAs and stretch out payments—an tax deferral—over their own life expectancies. But this is risky if you've remarried an the kids are from your first marriage. What if she cuts them out?

This simple approach also has drawbacks if you lack sufficient non-IRA assets t fund a credit shelter (also known as bypass) trust—a device commonly used to pre serve the estate tax exemption (now $1 million) of the first spouse to die, without leav ing the survivor short on funds. A credit shelter trust pays income and, if it's needed principal to the survivor during her lifetime; at her death the money bypasses her es tate and goes directly to the kids. With the estate tax exemption scheduled to rise t $1.5 million in 2004, $2 million in 2006 and $3.5 million in 2009, more well-off fam ilies face the choice of either putting an IRA in a credit shelter trust or forfeiting som of the first spouse's exemption.

Some choice. IRS rules force an IRA put in a credit shelter trust to make minimu distributions based on the life expectancy of the oldest beneficiary of the trust, usual the surviving spouse. So if she lives a normal life span, there will be nothing left in the IR for the kids. If she lives longer than average, the IRA will run out while she's alive; in thi trust, her life expectancy isn't normally recalculated each year as it is in a rollover IRA.

That's where Hoyt's charitable remainder unitrust comes in. Part or all of your IRA i left to the CRUT, which makes payments equal to an annual percentage of the principa (a minimum of 5% is required) to your spouse for her life and, after her death, to you children for their lives. What's left goes to charity. As with an IRA, earnings within th CRUT aren't taxed and payouts to family beneficiaries are taxed at ordinary income rates (When the money is taken out of the IRA and put in the CRUT after your death, it's no subject to income tax; if you withdraw the money while alive and put it in a CRUT, it is.)

By law, the CRUT must be designed so that if beneficiaries live an average span, th charity gets at least 10% of the trust's present value. But the benefits of longer tax de ferral, as well as the estate tax deduction for the charitable remainder, may be wort more to your heirs than the 10% given away, particularly if there's a wide age gap be tween your spouse and kids. If you're charitably inclined, the idea has added appeal.

The downside? The surviving spouse can't take more from the CRUT each year tha the stated percentage payout, let alone dip into principal. And you'll need a lawy schooled in estates, IRAs and charitable rules to pull this off. The CRUT should be name as the beneficiary or contingent beneficiary of your IRA, but wording the form proper and calculating the optimum amount to put in the CRUT can be tricky. —*Janet Nova*

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with its rules. Vanguard insists that you or your lawyer call before submitting customized forms. You'll also need legal advice if you're leaving your IRA to a trust; the area remains treacherous.

Note that IRS rules allow beneficiaries who inherit an account to name their own beneficiaries. An adult child, for example, might name a grandchild born after the original owner's death. Should the child die prematurely, the grandchild could continue drawing down the IRA over his parent's remaining life expectancy, rather than face a sudden forced liquidation. Not all custodians have permitted this, although policies are changing. Example: In June PNC Financial Services prohibited it and a phone rep wrongly blamed the ban on the IRS. In August PNC changed its policy. If you run into problems, transfer the IRA and insist on an institution-to-institution transfer.

Okay, you've got your beneficiary form in order. You've done your duty to your heirs, right? Nope. It turns out that some IRA custodians won't discuss your IRA with your executor, only with the named beneficiaries. Boston trust lawyer and IRA expert Natalie Choate advises giving the custodian written instructions to give executors the same access to information as beneficiaries. Whatever you do, keep records. Ask the custodian for a copy of the beneficiary form in its files and keep that copy with your will.

**DISTRIBUTION DANCE**

With the Dec. 31 deadline for taking required 2002 distributions nearing, remember that if you have more than one IRA account, you need not withdraw money from each. Instead, you can aggregate required distributions from your IRAs (but not with IRAs inherited from a non-spouse) and take the total from whichever IRAs you choose, even if they have different custodians. That could come in handy if you have an IRA you don't want to touch because it's stuffed with stocks or funds you think will rebound. To head off problems, notify custodians in writing that you are withdrawing from a different account.

Warning: If you're calculating your own minimum required withdrawals, use the table issued in April 2002; the January 2001 table can still be used this year, but the newer one requires you to take less. If your spouse is more than 10 years younger, you can withdraw even less using a special joint life expectancy table—provided your spouse is your sole beneficiary.

Don't be buffaloed into taking withdrawals before you have to. The IRS requires custodians to send notices to IRA owners when they turn 69½. Read the fine print: You don't have to withdraw the funds until Apr. 1 of the year *after* you turn 70½. Remember, you need not take distributions from your own Roth IRA, or one rolled over from a late spouse; other heirs must take Roth distributions.

Finally, if you started taking fixed distributions from your IRA before 59½ (a technique used to avoid a penalty for premature withdrawal) and your IRA's value has tanked, a new IRS rule could help. You can lower your withdrawals with a one-time switch to a payout based on your current age and balance. One catch: You must keep withdrawing at this new rate for five years, even if you pass 59½, the age at which you would otherwise be able to stop regular premature withdrawals.

**EXOTIC ASSETS**

A growing number of IRA owners are sticking real estate, partnerships and other alternative assets in their accounts. The law puts some restrictions on what an IRA can own—no collectibles or investments in companies you run, for example—but some custodians put even more limits. Don't try to work around this; find a custodian who will accommodate you, even if it costs a little more.

That's the lesson of a recent tax court case. New Orleans physician Robert Ancira wanted to invest $40,000 of his IRA in a private company. On the advice of his investment adviser, who believed the custodian wouldn't make the investment, Ancira got a check from the custodian and made the investment himself in the IRA's name. The IRS saw this as a taxable distribution and assessed back taxes and a penalty. Fortunately, in September a U.S. Tax Court judge agreed with Ancira that he had merely been the "conduit" for the investment and that it wasn't a distribution. Yes, Ancira won, but it cost him time, aggravation and $2,500 in legal fees. F

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# They Must Know Something

**Stock buying by corporate insiders is up again. It's a statistically proven, if not foolproof, buy signal.**

BY CHRISTOPHER HELMAN

EXECUTIVES IN THE WOOD-PANELED corridors of corporate America have the most up-to-date data on their companies' prospects. They're way ahead of analysts and portfolio managers, not to mention individual investors. They may be acting illegally on still-secret information about looming disasters (like ImClone's Samuel Waksal) or legally as clear-eyed purveyors of what's already out there.

Either way, their buying and selling actions often presage a stock's path, at least in the short term. "Insiders aren't always right, but they tend to be," says Jonathan Moreland, money manager and founder of newsletter InsiderInsight.com.

Note that insider buying is a better bullish signal on a stock than insider selling is a bearish one. Executives might be unloading their company stock for personal reasons, like diversifying their portfolios or paying for a second divorce. That's why there are commonly more insider sellers than buyers. Insiders buying, however, are doing so because they expect good performance. When insiders buy, the stocks beat the market by five percentage points over the following year on average, says University of Michigan professor Nejat Seyhun, who has studied 25 years of trades.

A caveat: Although it isn't a frequent occurrence, insiders sometimes buy their doggy stock for public relations purposes. In August eight Lucent insiders, including President Patricia Russo and Chairman Henry Schacht, bought 1.8 million shares at $1.50. Lucent promptly fell to 70 cents, but has since traded up to $1.25.

How good is insider activity at divining the direction of the entire market, which you could play by purchasing or shorting the S&P 500 or other indexes? Academics, market strategists and other sages have long argued whether the sell/buy ratio is a trustworthy marketwide

telltale. Some dismiss the insider factor as akin to other market anomalies, such as the January effect, which holds that stocks rise that month (the S&P fell 3.6% last January). Others find insiders an accurate marketwide barometer—and lately that belief has been borne out.

Witness last March and early April, when the market was sailing near post-Sept. 11 highs. First to see the approaching storm, insiders were more bearish than at any time in the last decade. According to Lon J. Gerber, director of insider research at Thomson Financial, there were twice as many companies selling as buying, and $2.5 billion of stock sold to $120 million in stock bought. The sell/buy ratio of 21 compares with a five-year average of 12. The insiders had the right instincts. The market plunged 30%.

Now the sentiment has flip-flopped to bullishness. At $698 million, September insider sales were at the lowest level in seven years. Buys were $157 million. The sell/buy ratio, at 4.4, is the lowest since 1998, save September 2001, after the terrorist attacks disrupted the market. In principle, then, there ought to be a lot of bargains out there.

Note that the October buying number is lower than the spring one. To newsletter person Moreland that means: "No one feels strongly one way or another." To Thomson's Gerber: "Executives think we've hit a bottom. It might not get better soon, but it won't get much worse."

Whatever it says about market trends, if anything, companies with strong insider buying deserve a look *(see table)*.

Gerber gives the nod to Park Place Entertainment, which owns casinos like Caesars and Bally's. Thomas Gallagher, president of Park Place, bought 135,000 shares in the last year, 50,000 of them in early October at the stock's 52-week low of $6. The company is coming out of a year of earnings depressed by asset write-downs and building costs. Another com

## True Believers

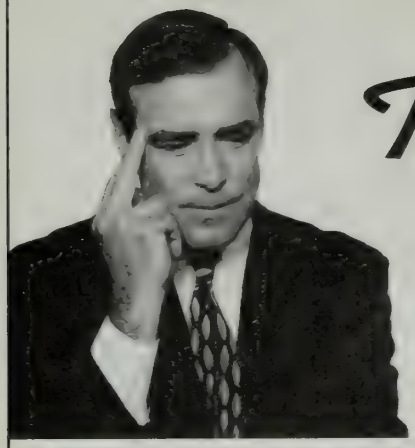
Insiders have been net buyers at these companies recently, a positive sign for the stocks. The stocks are cheap, but the last three—tech issues all—are in the red.

| Company | PRICE recent | PRICE 52-week high | Price/book | Shares insiders bought[1] (thou) |
|---|---|---|---|---|
| Ameritrade | $4.70 | $7.27 | 0.9 | 356 |
| Park Place Entertainment | 7.45 | 12.93 | 0.8 | 70 |
| Petsmart | 19.73 | 21.00 | 4.7 | 50 |
| Power-One | 5.65 | 13.25 | 1.8 | 1,283 |
| Solectron | 2.46 | 16.45 | 0.4 | 142 |
| Vitesse Semiconductor | 2.00 | 15.50 | 0.9 | 595 |

[1]Between Aug. 1 and Oct. 11.

*Sources: Thomson Financial; Market Guide via FactSet Research Systems.*

**Ballew Jewelers:** Freehold, NJ • **Feldmar Watch & Clock Center:** Los Angeles, CA
**Fishel & Dowdy Jewelers:** Fort Myers, FL • **Giess & Son:** Greenville, SC, Spartanburg, SC • **Jackson Jewelers:** Salem, OR
**Lions Jewelers:** Charlotte, NC • **Lippa's Jewelers:** Burlington, VT
**Schwanke-Kasten Co. Jewelers:** Milwaukee, WI



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pany on Gerber's computer screen is pet store chain Petsmart. President Robert Moran bought 50,000 shares on Oct. 9. Though the stock is up 145% in the last year on soaring earnings, Moran's purchase sends the message that there may be more strength ahead.

Moreland likes Ameritrade. Recently merged with Datek, the online brokerage has managed to stay profitable in a bad market. In July three insiders, including Chief Executive Joseph Moglia, bought 900,000 shares at less than $4.

Power-One makes devices that control the quality of electrical power for high-tech applications. During September seven insiders, including the chief executive and the chief financial officer, bought 745,000 shares near Power-One's three-year low of $2.35. That came a week after the company announced restructuring charges and a plan to cut $25 million in annual costs by, among other things, shedding a quarter of its employees. The stock has since doubled to $5.65.

In early October shares of Solectron, contract manufacturer of high-tech products, hit a ten-year low of $1.55. Around the same time, Chairman Koichi Nishimura bought 150,000 shares, the company's chief financial officer and another director, 40,000 more. Solectron, its market gutted this year, has posted big restructuring charges and now trades for less than half its book value.

Moreland's favorite high-risk, high-reward idea is Vitesse Semiconductor, maker of chips for telecom applications. While the outlook remains awful for telecom, Vitesse has had some success cutting costs and saving cash. Recently six insiders, including Chief Execu-tive Louis Tomasetta, have bought 380,000 shares at around $1.30. Recent price: $2.

How do you find out about insider actions? Moreland's monthly newsletter ($250 a year) is one way. It claims his recommendations have beaten the market this year, up 13.2%. Over the last 12 months he says he's up 30%, the result of the unprecedented buying opportunity when markets plunged after Sept. 11. Insider trade data is also available on financial Web sites like Yahoo Finance, Microsoft Network and thomsonfn.com.

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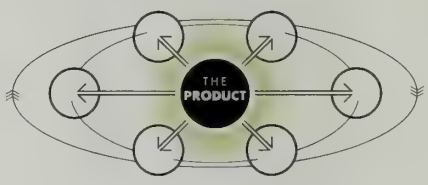


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# Cheap But Growing

## Don't give up on buying growth stocks. Just be picky about how much you pay for them.

Y TRICIA MCGINNIS

IT'S SHAPING UP AS ANOTHER ROTTEN year for corporate earnings. Thomson Financial is projecting less than $49 for arnings per S&P 500 index unit in 2002, own from $55 two years ago. (That's xcluding writeoffs.) A cut in earnings uidance from a corporation can send its ock reeling—Albertson's and Sears, Roeuck have both been recent victims of the henomenon.

And yet growth is not dead. There are ozens of companies with improving esults and reasonable prices. We went unting for some.

We screened the 5,000 North Ameriin stocks in the estimate database of homson Financial/IBES, looking for comanies trading at a below-market multiple f their 2003 earnings projections but ith good growth prospects, which we efined as an expectation of a 15% or betr gain next year in earnings per share. imiting the list to companies with annual les of more than $500 million, we turned p 349 names. Seven are shown below. hese picks have two additional virtues: test return-on-equity greater than the hree-year average and positive momenm in earnings forecasts. The latter was efined this way: a flash estimate for 2003 hat either matches or exceeds the consens number. The flash number is defined as the average earning estimate of the analysts (usually more than one) who have updated their numbers in the last month. The idea being that the more recent the estimate, the more accurate it will be.

SCP Pool distributes $956 million in pool supplies and equipment through 199 stores in North America and Europe. For the first three quarters of 2002 its earnings were up 18% on a sales gain of 14%. You can get it for 15 times next year's estimated earnings of $1.95 a share.

Another stock that passed our screen is Cummins, which makes heavy diesel engines. In 2001 this firm's sales fell 14%, but business appears to have stabilized. Through the first three quarters of 2002 the company posted earnings of 54 cents per share, against a loss of $2.74 a year ago. And while Cummins' engine and power-generation sales are depressed, third-quarter sales improved 12% in the filtration and international segments, which make up 27% of its $5.9 billion annual revenue.

Cummins management says that the company could earn between $2.10 and $2.30 per share next year. Wall Street analysts aren't quite as optimistic, but their consensus forecast of $1.95 still represents a quadrupling of expected 2002 results. Cummins currently sells for 12 times the analysts' 2003 estimated multiple and at a price close to its five-year low. F

## Growth Is Where You Find It

The stocks below combine below-market P/E multiples with good growth prospects.

| Company | Recent price | YTD price change | 2003 EST P/E | 2003 EST EPS growth | Latest 12-mo sales ($mil) |
|---|---|---|---|---|---|
| CarMax | $16.50 | -27% | 14 | 22% | $3,631 |
| Cummins | 24.00 | -38 | 12 | 359 | 5,902 |
| Hollywood Entertainment | 19.34 | 35 | 13 | 19 | 1,445 |
| McKesson | 30.84 | -18 | 14 | 21 | 53,511 |
| SCP Pool | 28.37 | 3 | 15 | 21 | 956 |
| Wausau-Mosinee Paper | 9.69 | -20 | 13 | 69 | 939 |
| West Marine | 14.65 | 0 | 12 | 24 | 522 |

Prices as of Oct. 30. *Sources: Bloomberg Financial Markets; FT Interactive Data, Thomson Financial/IBES and Multex via FactSet Research Systems.*

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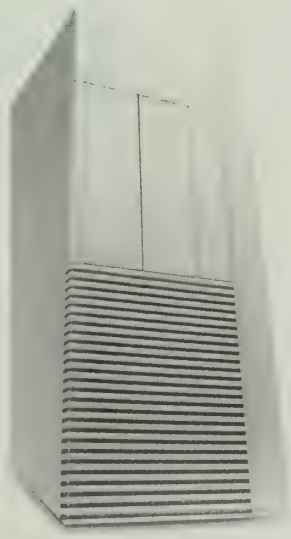

# Makers & Breakers

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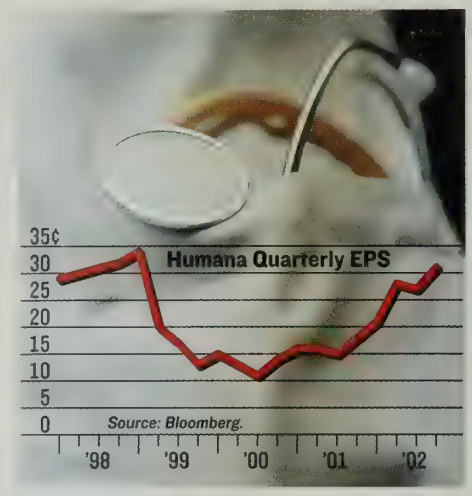
## Physician Heals Self




MANAGED CARE COMPANIES, never beloved of the public, have made themselves even more unpopular lately by squeezing costs and hiking premiums. Their earnings and market performances have accelerated faster than an on-call ambulance. In three years the shares of powerhouse UnitedHealth Group have tripled, to $92.

Conspicuous exception to this rally: **HUMANA (12, HUM)**. A spate of particularly bad earnings shortfalls in 1999 sent the stock skidding 75% to a mid-2000 low point of $5. Compared with the rest of the industry, its recovery has been anemic. Even when Humana's third-quarter 2002 earnings shot up 20%, its shares declined 10%, in part because of the company's mediocre record in the Chicago market.

The worry is "way overdone," says SG Cowen analyst Edmund Kroll, who rates Humana a strong buy. At a trailing price/earnings ratio of 11 versus the managed care sector average of 23 (UnitedHealth: 24), Humana stock is cheap for a company whose net income Kroll figures will grow 15% to 20% for each of the next three years. Humana boss Michael McCallister has reined in medical costs, dumped unprofitable members and hiked premiums. Now the 6.4 million membership is slowly growing again.

Humana is ahead of most of its peers in designing new consumer-oriented plans to hold down soaring medical costs. Instead of the usual one-size-fits-all approach, its Web-based SmartSuite product allows employees to customize their health care plans. With SmartSuite, Humana was able to keep health care cost inflation for its own Louisville employees to a low 4.9% increase versus an expected 19.2% hike. *—Robert Langreth*

## Wireless Windfall

TELECOM IS LANguishing, and wireless stocks are even worse. But consider 100-year-old **WARWICK VALLEY TELEPHONE (57, WWVY)**, a tiny telephone company in upstate New York. It has 30,000 customers and a mere $7.5 million in 2001 earnings.

Lawrence J. Goldstein, of hedge fund Santa Monica Partners, says investors are wrongly focusing on its sleepy main business. Warwick also owns a 7.5% stake in obscure entity Orange & Poughkeepsie Cellular Partnership—a wholesaler of minutes to cellular operators like Verizon. Now 70% of Warwick's net income comes from Orange's dividends to the partners.

We don't normally recommend a stock with such a small market cap ($100 million) for liquidity reasons. But if you take the value of its wireline phone business ($95 million) and add it to the partnership value ($102 million, using a standard partnership multiple of 15 on the Orange dividend), Warwick is worth double its market cap. With the Orange dividend growing well ($6.8 million expected this year, up a third) and Warwick's cheap P/E of 13, the risk is worthwhile.

*—Nikhil Hutheesing*

## Switched On

**AVOCENT (23, AVCT)**, A MAKER OF KEYboard, video and mouse (KVM) switches, is hurt by the lackluster server market and hit a 52-week low of $12 in October. KVM switches let a network manager control hundreds of servers, which saves space and salaries.

Nevertheless, the $252 million (revenue) firm has half this market, which will turn up at some point. Matthew Kempler at Sidoti & Co. likes the company's debt-free balance sheet and nice cash stash ($158 million). After losing money in 2001, it has eked out a very modest profit this year. *—Emily Lambert*

## Network Hangover

LIKE SO MANY OF ITS PEERS IN THE NETworking business, **JUNIPER NETWORKS (7, JNPR)** has seen much of its market value disappear like the corporate technology spending that once fueled its ascent. In October 2000 it traded for $243 a share. Despite all, WR Hambrecht analyst Reginal King says the company is still overvalued.

By his reckoning, Juniper's enterprise value (equity and debt minus cash) is a pricey 3.3 times its expected 2002 revenue. But rival Cisco is just 2.6 times and Extreme Networks only 0.4 times. Although King expects Cisco and Extreme to post profits this year and next, he's projecting modest losses for Juniper.

Juniper's balance sheet is strong, with $1.2 billion in cash, and the company has improved financial discipline. But the stock has more to fall. Short it and cover at $4. *—Daniel Kruger*

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# Bubble Trouble

IN THE BUBBLE YEARS, "VISIBILITY" WAS SAID TO BE LIMITless. It was the perfect time not to invest. And Scott Bedford didn't invest, at least not on the long side. He stopped buying tech stocks in 1995, the year that Netscape went public. "So I was premature by—what?—five years," he quips.

This a story about how hard it is to do the right thing with money, whether in a bull or a bear market. Bedford, a San Francisco hedge-fund manager, has had a thorough grounding in the subject. As a salesman at Rothschild, Unterberg, Towbin, he participated in the high-tech boom of 1983 and the reciprocal high-tech bust of 1984. In 1990 he set up shop as a private tech-stock investor. In that capacity, he reports, he has generated total annual returns of 18.7%, net of all fees, despite consistently having more exposure to the short side of the stock market than to the long, even during the great levitation.

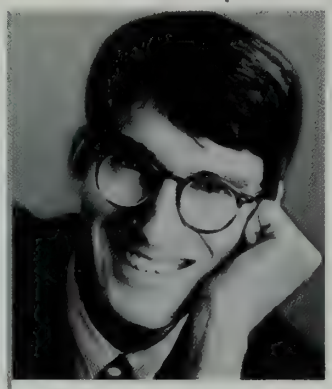
**Investing in fallen tech stocks is hard when both Wall Street firms and investors are scared of them. But the question is: Do you have a strong stomach?**

But he says that nothing in his career prepared him, or his partner, Peter Schleider, for what they have lately encountered investing in fallen Internet and technology companies. Never have they seen stocks so cheap, people so frightened or Wall Street so disengaged from the business of analyzing securities and making markets. To illustrate Wall Street's sudden disappearance, Merrill Lynch recently discontinued market-making in 7,600 small stocks.

Calling themselves Peninsula Technology Fund, the partners set up shop on Oct. 1, 2001 to conduct salvage work in and around Silicon Valley. They had all of $17 million. Yet—an omen of strange and wonderful things to come—they had difficulty putting even that amount of money to work in a niche of the market that, at the 2000 top, was capitalized at $1 trillion.

There are 18 stocks in the Peninsula hedge fund's portfolio, and they are valued on average at just two times cash. Consider what this means: The mean market cap is only twice the net cash on the companies' balance sheets. The typical market cap is $60 million. Among their holdings: FindWhat.com, LookSmart, Autobytel and Aspect Communications.

Merely possessing cash is no guarantee of corporate survival, of course. Notoriously, Internet survivors tend to spend it to fund losses. The partners estimate, however, that by year-end all but three or four of their companies will be generating positive cash flow from operations (roughly speaking: net income, plus depreciation/amortization, plus or minus some working capital changes). They affirm that the Internet is a powerful medium of communication and commerce, just as the boom-time promoters claimed. Where the bulls went wrong was in slightly exaggerating the profit potential of the newly hatched e-businesses—say, by a factor of 100.



The partners aren't having fun yet. Up 40% in the last three months of 2001, they were down by 26% in the first nine months of 2002. You might suppose that, as intrepid value investors, they would be borne up and sustained by the compelling bargains they've discovered in the Nasdaq ruins. Actually, their hearts are in their mouths. "I can tell you right now," says Schleider, "that selling below cash and increasing your revenues sequentially and adding to the profits of the business, that this is not compelling to people. It is compelling to me, but I feel like I am in outer space."

Bedford says that being bullish in a bear market reminds him of being bearish in a bull market. At the 2000 peak, you'll remember, no price seemed too high. Today, cheap $5 stocks routinely become cheaper $3 stocks. "I am as much in survival mode in this fund as I was as a short-seller," he says.

Starting up in the wake of Sept. 11, the partners could have expected that a certain amount of bad news was already in the market. They have found more. The economy is weak, and tech-company insider sales have been torrential. And because the sellers are needy, they are indifferent to valuation. Venture capitalists are among the most aggressive sellers, says Schleider, whereas—here is a faint glow of optimism—a small number of tech executives have started buying.

Bedford worries that the overall market is anything but cheap, as they reckon cheap. If the S&P 500 ever came to rest in the valuation neighborhood of the companies they own, the partners have wondered, who would buy anything except the big-cap liquid names they don't own?

To rally his fortitude, Schleider sometimes thinks of his grandfather, who managed a small furniture company in a little Texas town during the Depression. "He would come home on a Saturday afternoon," relates the grandson, "and say to my dad or grandmother, 'I made payroll.' And that is what these companies are living through."

Forbes.com | James Grant is the editor of *Grant's Interest Rate Observer*. Visit his home page at www.forbes.com/grant.

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# Transported

DRIVING AROUND, WHETHER IN THE COUNTRYSIDE OR the city, is something I like to do. And while Americans have never lost and will never lose their love of cars, Detroit has experienced its usual suffering in this recession. The quintessentially cyclical industry, autos at least perform strongly once the good times resume.

That may well be, but I look for the best rebounds from more-distant corners of the transportation world: railroads, truckers and makers of military vehicles. The fact that these players have small capitalizations is an advantage in and of itself—because small caps usually do well coming out of a downturn. These stocks are what I call "growth cyclicals." They're mature companies that lost some momentum in the recession but still enjoy long-term growth potential.

**The auto industry typically does well in an economic recovery. But other transportation stocks should do even better—in the trucking, railroad and military areas.**

They remind me of semiconductors—products at the core of today's economy but hidden from sight. Other than an "Intel Inside" insignia, do you know or care what chips are doing, so long as they keep your computer functioning? Chip stocks move up and down with the broad economy more than ever before. We saw this vividly in 1998 when the Asian contagion lessened worldwide demand for chips. The next year chips recovered. Now they're down again. They certainly will be back.

The nonglamorous growth cyclicals specializing in transportation should benefit dramatically from an economic upturn. My favorite stocks here are up over the past two years, yet have much further to climb:

**Curtiss-Wright (55, CW)** is a small firm with a big past, tracing its origins to flight pioneers Wilbur and Orville Wright, and Glenn Curtiss. The company makes products such as valves and defense components that are made of specially treated metal. Military and NASA now provide one-third of its revenue. Federal spending here, as well as in another of the company's areas—homeland security—is going up. Curtiss-Wright netted $40.6 million, or $3.97 a share, on revenue of $343 million last year. (The earnings exclude an extraordinary gain of $42 million from sale of properties.) My firm is projecting earnings per share near $4.15 for 2002 and $4.75 for 2003.

**Engineered Support Systems (51, EASI)** is a holding company that produces support equipment for the military for use in the field, which includes generators and life-support modules, as well as advanced electronic systems. Other military work includes making heavy equipment like aircraft-loading vehicles and tank transporters. With war news on the front page daily, the market has clearly noticed the near-term opportunities for Engineered Support, which blew the doors off its third-quarter earnings per share.

It's obvious that this profitable, well-run enterprise is beginning to benefit from the long defense-spending spree. Assuming that our 2002 earnings forecast holds true, the company's five-year earnings-per-share compound annual growth rate should come in at about 29%. The stock currently trades at a 22 P/E.

Never mind the demise of the dot-coms. Here is a survivor from the market blow-off of a hundred years ago, when railroads were overbuilt and going under. **Genesee & Wyoming (21, GWR)** is a regional rail carrier that operates systems in the U.S., Canada, Mexico, Bolivia and Australia. This long-term player has grown through both smart acquisitions and tightfisted management. It owns 21 lines in five countries and operates 8,000 miles of track. If anyone benefits from faster U.S. economic growth, it should be Genesee, since 60% of its net income is derived from domestic shipments. Recovery-inspired increases in coal and other commodity shipments will help. My firm is expecting earnings per share, which was $1.49 in 2001, to hit $1.70 this year and $1.85 next.

Trucking is about as sexy as trains. **Knight Transportation (20, KNGT)** has established itself as an efficiently run, consistently profitable long-distance freight hauler. The trucking industry's a good barometer of where the economy is heading, and there's continuing evidence of recovery here. Major carriers have parlayed the recent pickup in demand for their services into rate increases in the range of 3% to 5%. At Knight the management has a knack for controlling costs while increasing both total miles per tractor and average transportation revenue per mile.

The stock trades at a 28 multiple. Sounds high. But investors should remember that over the past five years, which include the recent industrywide slump, Knight has increased earnings per share at a 23% annual rate on a pro forma basis. (I am excluding a 4% investment in a tech company named Terion now in Chapter 11.) Buy the stock on dips at $17.50 or less and hold on to it for what's likely to be a nice long run.

Forbes

Marc Robins is editor-in-chief of *RedChip Review*, an investment advisory service on small- and micro-cap stocks. Visit his home page at www.forbes.com/robins.

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# What's in a Name?

SHAKESPEARE'S ROMEO MUSED, "WHAT'S IN A NAME?" speculating that a rose would smell as sweet by any other moniker. Obviously, Romeo was not an investor, because the power of a brand name is immeasurable. Today's brutal bear market has given value investors like me the rare opportunity to purchase exceptional companies with leading brands at bargain prices.

Brands endure, the roses in a thorny market. A high-quality product or service fosters fierce customer loyalty and insulates its owner from the worst of economic cycles. A classic example is Coca-Cola—more worldwide phenomenon than beverage, regardless of its recent travails.

**One blessing of a bear market: Great companies with magical brand names are today very cheap. The power of a good brand is simply enormous.**

The following picks are the Cokes of their industries. These dominant brands have been on my wish list for years but were too rich for my disciplined value style. With their solid fundamentals, dedicated management and battered prices, they present compelling buys.

**McDonald's (18, MCD)** serves 46 million people every day. That's like feeding every single person in the three largest U.S. cities breakfast, lunch and dinner. The company has 30,000 restaurants in 121 countries. Despite its comfortable spot as the number one fast-food chain, Mickey D's is fighting to maintain market share against newer chains. Profits are down and new store openings have slowed. But the Golden Arches have not lost their luster and still have immense brand value.

Off the 1999 year-end high of $48, McDonald's gives new meaning to the term "value meal." This depressed share price represents a Big Mac discount of 33% to my calculation of its intrinsic value, $27. Would you like earnings with that? McDonald's sells at 13 times trailing earnings.

**Sotheby's Holdings (8, BID)** has a 258-year history as an auctioneer of fine arts, antiques and collectibles, and a class brand to match. The auction market duopoly—Sotheby's and the privately held Christie's International—survived the price-fixing scandal. Sotheby's has also staved off competition from a deep-pocketed third player, Phillips, de Pury & Luxembourg.

With former chairman Alfred Taubman and former chief executive Diana Brooks out because of their roles in the rate rigging, Sotheby's is under new management. Beyond these individuals, insofar as customers are concerned, the company's integrity is not in question. In short, the world has forgiven the antitrust violations.

Cost-cutting and an improving economic environment should put Sotheby's back in the black by the end of next year. The stock hit a five-year peak of $47 in April 1999 and currently sells near alltime lows. I predict net income of $25 million, or 40 cents a share, on revenue of $400 million in 2003. At 20 times this depressed estimate, the shares are affordable. They are also at a 56% discount to their $18 intrinsic worth.

Suitably headquartered on Manhattan's posh Fifth Avenue, **Tiffany & Co. (26, TIF)** has epitomized luxury since it was founded in 1837. The store chain is best known for fine jewelry (80% of sales in fiscal 2001), but it also sells other high-style goods ranging from clocks to crystal. The 1961 film classic *Breakfast at Tiffany's* enshrined the retailer's timeless allure in popular culture. It has trademarked the particular shade of blue used for its signature boxes. The company's classic designs enjoy an extended shelf life of 20 to 40 years, allowing it to adhere to a strict policy of never holding a sale.

That said, the stock is on sale at a 28% discount to its $36 intrinsic value, 22 times trailing earnings and 20 times forward.

In 1889 **Northern Trust (36, NTRS)** opened a modest one-room office in Chicago's Loop. From these humble roots, the company has grown to become a globally revered asset manager for wealthy people, corporations and institutions. Assets under administration: $1.4 trillion.

Northern Trust dominates the market for millionaires and is well poised to benefit from that group's growth. While the U.S. population is expected to increase 1% annually over the next five years, the high-net-worth segment (people with $1 million or more of investable assets) is expected to grow at nine times that rate, says Northern Trust. Known for its high-touch customer service, the company has an office within a 30-minute drive of a third of U.S. millionaires.

The stock is far down from the $92 it hit in December 2000. Now it trades for 18 times trailing earnings and 16 times forward earnings. The price also represents a 32% discount to my $53 estimation of the share's intrinsic value.

Forbes | John W. Rogers Jr. is chairman and chief executive officer of Chicago-based Ariel Capital Management, Inc., the adviser to the Ariel Mutual Funds. Visit his home page at www.forbes.com/rogers.

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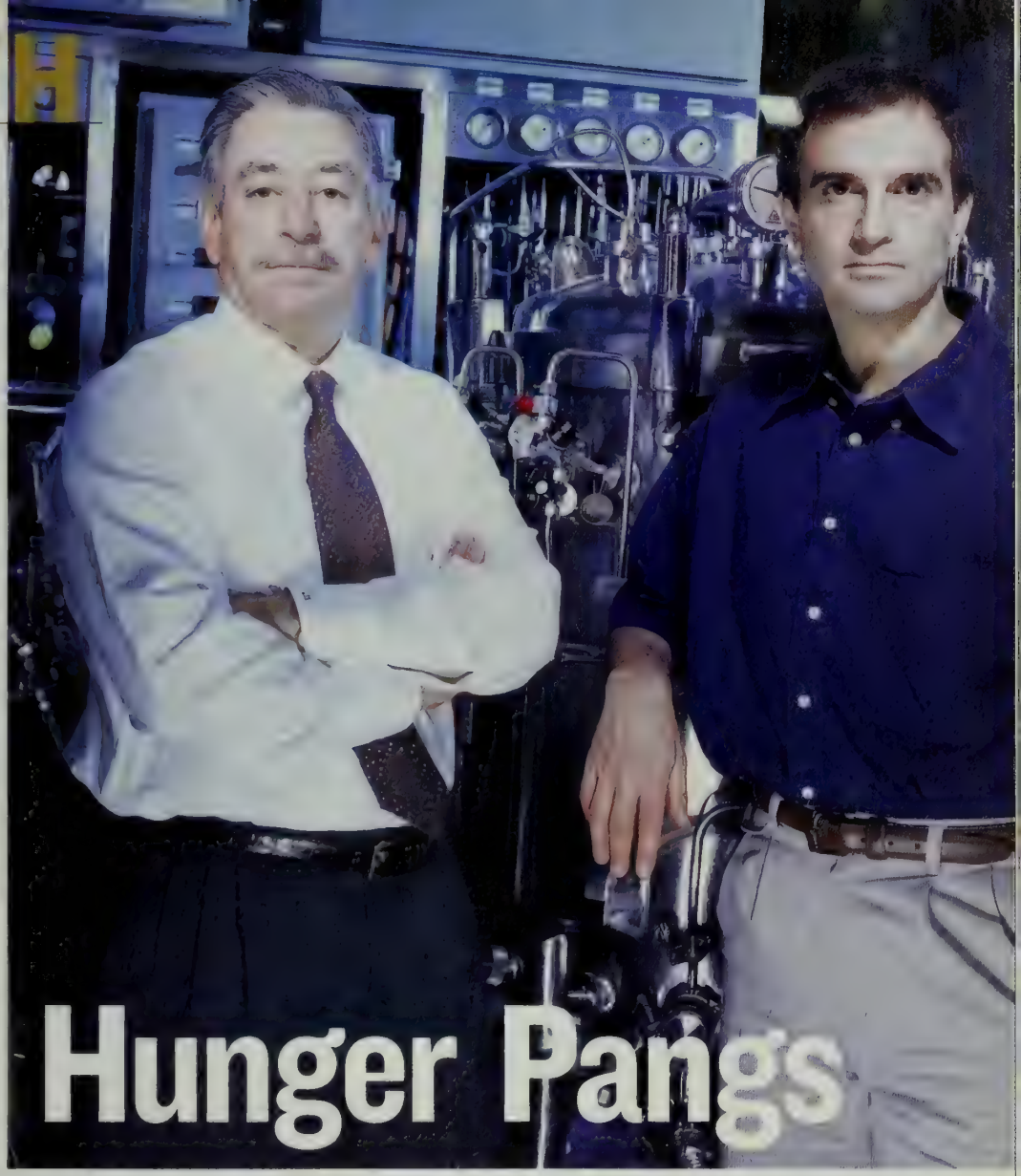


Appetite suppressors: Regeneron's Leonard Schleifer and George Yancopolous

# Hunger Pangs

**Breakthrough obesity drugs often leave dashed hopes and awsuits in their wake. Regeneron's Axokine aims to break that losing streak.**

**BY ZINA MOUKHEIBER**

AT IS WHERE IT'S AT, BUT the drug industry has an awfully hard time getting there. One promising obesity pill after another s come out in recent years, ly to fall short or endanger the blic each time.

As a result the industry ings a mere $440 million in es from a population of 60 mil- n obese Americans. The newest pills, Hoffmann-La Roche's Xenical and Abbott Laboratories' eridia, are struggling after a promising start. Xenical, which pre- nts the body from absorbing fat, can provoke severe diarrhea; its es fell 16% to $170 million last year and are unlikely to rebound ich. Meridia, on track for about $120 million in sales this year, nder scrutiny from the Food & Drug Administration after sev- l patients died. The most effective weight-loss drug remains the -year-old generic phentermine—one-half of the infamous fen- en combo that caused heart problems and forced Wyeth to set de $13.2 billion for liability settlements.

Meanwhile, people keep putting on the pounds. Some 31% the adult population is now considered obese, double the el in 1980, a study in the *Journal of the American Medical ociation* reported last month. In this pandemic of portliness, ne 300,000 people die each year of obesity-related diseases such diabetes and cardiovascular problems. U.S. Surgeon General vid Satcher warns that obesity, if left untreated, may soon ise as many deaths as smoking.

Now comes a new glimmer of hope: a hunger-fighter called okine, from Regeneron Pharmaceuticals of Tarrytown, N.Y. It is based on a chemical in the brain that prevents injured neurons from dying. Axokine is the front-runner of two obesity drugs in late-stage trials; the other, from Sanofi-Synthelabo of France, appears to block the cannabinoid receptors in the brain that stimulate hunger in response to marijuana. And hope springs eternal. Last month Myriad Genetics said it had discovered an obesity gene.

Studies from Regeneron's middle-stage human trials released last year show that obese patients weighing 220 pounds lost an average of 4.7% of their weight, or 10.4 pounds, over 12 weeks, while those on a sugar pill gained a pound. Forty-eight weeks after stopping treatment they had shed an average 12.4 pounds, or 5.6% of their weight. Regulators want to see a minimum 5% average loss over one year; the loss of a mere 10 pounds reduces an obese person's chances of developing diabetes by up to 60%.

A two-year late-stage trial began in September 2001 with 2,000 patients. Side effects have been limited to nausea and mild skin reactions to the injection. Regeneron Chief Executive Leonard Schleifer hopes to file for approval by the end of 2004. "It's been a long road. Hopefully this will be the first drug bub-

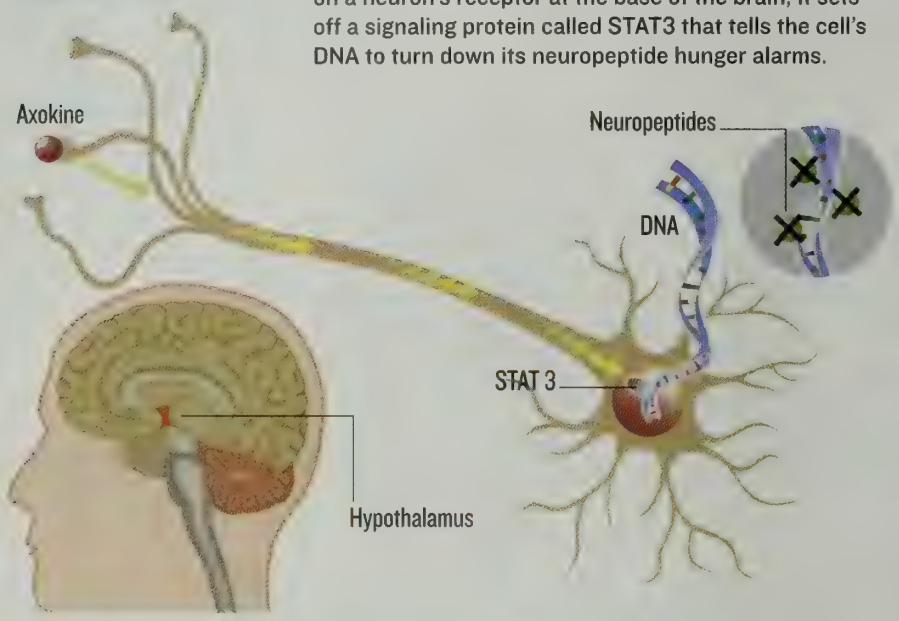
bling to the surface," he says.

Regeneron badly needs a winner. With only $20 million in expected revenue this year, it has never brought a drug to market since its inception in 1988. It has lost a cumulative $388 million but has plenty of cash left ($341 million) and a hardy board of directors that includes former Merck chairman Roy Vagelos and Nobel-winning pharmacologist Alfred Gilman.

When Schleifer, a 50-year-old neurologist, cofounded Regeneron with George Yancopoulos, a molecular immunologist, the main target was Lou Gehrig's disease. In 1990 they cloned a breakthrough product: ciliary neurotrophic factor, or CNTF, a nerve growth hormone they later named Axokine. But it failed to stop Lou Gehrig's, and trial patients lost 10% of their body weight. "We were concerned. We had no clue what was causing the weight loss," says Yancopoulos.

## Think Thin

When Regeneron's experimental drug Axokine docks on a neuron's receptor at the base of the brain, it sets off a signaling protein called STAT3 that tells the cell's DNA to turn down its neuropeptide hunger alarms.




Clues soon began to emerge from an unexpected place. In 1994 a scientist at Rockefeller University discovered the "obese" gene, which plays a role in regulating hunger. Mice missing the gene were obese. When injected with the protein leptin, which the obese gene codes for, they shed up to one-third of their weight in fat. A media frenzy over the "fat gene" erupted, and Amgen paid Rockefeller U. $20 million for exclusive rights, outbidding six other firms.

But trial patients on leptin lost very little weight, and Amgen halted its trials last year. The leptin breakthrough, however, was a stroke of luck for Regeneron. In 1997 a group of Italian scientists published a paper showing that Regeneron's drug Axokine and leptin activated the same signaling pathways in the brain. "We said, 'Holy cow, we've got an obesity drug on our hands,'" says Schleifer.

He won a big vote of confidence in 1997, when Procter & Gamble paid Regeneron $140 million in cash, half of it to acquire a 16% stake in the biotech boutique, the other half to be used to jointly develop drugs, including Axokine, and to split th profits. But patients at high dosages in early trials develope severe cold sores. In mid-1999, as the fen-phen scare was in ful swing, a gun-shy P&G pulled out of the Regeneron deal and ulti mately reduced its stake to 6%—but left the cash behind.

Schleifer was on his own, betting big that Axokine coul deliver. At first glance Axokine and Leptin look like completel different hormones. Axokine is produced in the brain and ex tends the life of damaged neuron cells. Leptin comes from fa tissue and helps the body store fat. Probing further, Yancopou los realized that Axokine and Leptin were related: They bot dock at similar cell receptors in the hypothalamus, a clump o neurons located at the base of the brain and active in control ling appetite. Once both hormone connect to their receptors, they activat a signaling protein called STAT3, which binds to the neuron's DNA. The DNA i turn sends a message to the cell to sto making more of a group of neuropep tides that tell the body it is time t chow down. "Light bulbs went off, Yancopoulos recalls.

Amgen's Leptin flopped because i works only in patients who lack th obese gene. It has little effect on thos with the gene, because their bodie release leptin in proportion to th amount of fat present. The more the eat, the more leptin they make. A injection of additional leptin doesn make them eat less. This is why Amge pulled the plug.

By contrast, Axokine seems t work on a broader patient poo though why it works at all remains mystery. Yancopoulos thinks it fools the brain into forgettin the number of calories it missed. After he took some mice off forced diet, they binged, as humans do, surging past their fo mer body weight. But critters taken off Axokine slowl returned to their original intake without chunking up. Huma trials have yet to prove this.

Schleifer vows that Axokine can rival the performance phentermine, which generates an average 13% weight loss aft 36 weeks, compared with little more than 5% for a 52-week pr gram of Meridia or Xenical. "People are looking for that mag pill; they're looking to lose 20% to 30%, and if that's not me they get upset," says Donald Schumacher, director of the Cent for Nutrition & Preventive Medicine in Charlotte, N.C.

The FDA has stringent requirements on potential obesi drugs. Regeneron has to complete two years of late-stage testi to show that its drug works, whereas a company developing, sa a diabetes drug can stop at six months. What's worse, insuran companies have yet to begin reimbursing patients for antiob sity drugs. Schleifer is undaunted: "We hope we're going exceed the drugs on the market."

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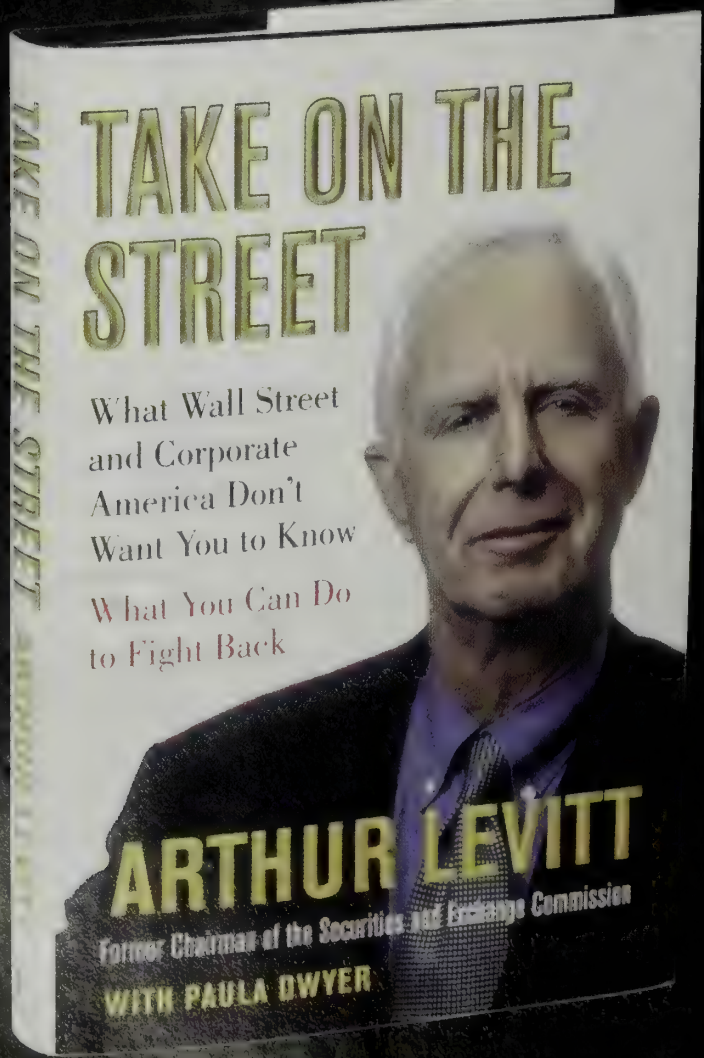


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# Best Natural Preservative: Money

Woodsman, spare that plant:
**Botanist Paul Cox rescues an ecotourist paradise from loggers.**

BY MICHAEL MAIELLO

A HUNDRED FEET IN THE AIR, A NETWORK OF ROPE AND CABLE BRIDGES CRISSCROSSES the 30,000-acre Falealupo Preserve in westernmost Samoa. From the fern- and orchid-rich canopy hikers look up to see cloud-ringed Mount Sili Sili, which juts 6,800 feet into the air. The preserve has one of only nine such aerial rain forest walkways in the world. That it exists at all can be credited to a resourceful scientist named Paul Cox.

Cox, who has a doctorate in biology from Harvard, became persuaded that Samoa's jungle contained rare botanicals of potential use against AIDS and cancer. To protect them, Cox had to engage in some pretty unscientific behavior—such as letting himself be made a god. Thirty-four native chiefs insisted he accept the name of the Samoan war goddess, Nafanua. They meant it as an honor, and Cox couldn't very well say no. His scheme for saving flora depended on his rapport with the chiefs. He admits, though, that he worried about committing the cardinal sin of anthropology: As a fan of Joseph Conrad's novels, he feared he might be just one more white guy succumbing to heat and his own hubris.

Samoan healer Pea Lilo applies herbs to a Falealupo patient

Cox, 49, might have lived a less colorful life had he not lost his mother to breast cancer in 1984. The trauma inspired him to take a leave from his post as a botany professor at Brigham Young University and to return to Samoa, where he'd lived as a missionary dur-

TIM RUE FOR FORBES

From the leafy mamala plant, Cox hopes soon to derive a potent AIDS-fighting drug.

**Green another 50 years: A commercial covenant now protects Samoa's botanical-rich forest.**

ing college. With his fluency in the Samoan language and his knowledge of plants, he embarked on an experiment in ethnobotany (the study of the relationship between plants and cultures).

Working with Falealupo's native healers, he determined that bark from the indigenous mamala plant, used to treat everything from incontinence to hepatitis, should be screened for antiviral properties. He sent samples to the National Cancer Institute in Bethesda, Md.

The plant itself, meanwhile, was threatened with destruction. Falealupo faced a financial crisis that put the survival of the very forest at risk. The Samoan government had demanded the village build a school or risk the expulsion of its children from the nation's public education system. To raise the $85,000 needed for the school, Falealupo had sold logging rights to Samoa Timber Products, which had begun clear-cutting. To stop that—and to protect the mamala and the forest's other botanicals—Cox had to buy back the rights and strike a deal with local chiefs.

He offered to sell his home in Utah and solicited donations from backers who included Rex Maughan, a member of The Forbes 400 who runs an Amway-style marketing business in natural products called Forever Living. Cox also drafted what he calls the Falealupo Covenant between himself, the village and the other parties that stood to gain from preservation of the forest's botanical treasures. The village agreed to keep loggers out for 50 years and to allow Cox to continue his research. In exchange Falealupo got money already donated ($85,000) plus 33% of Samoa's shares of royalties on any commercial drugs derived from mamala. Says Cox, "It was the first time that we've recognized the intellectual property rights of a native population in drug research."

At the National Cancer Institute researchers isolated a compound known as prostratin from mamala. This was bad news for mamala's potential as a cancer drug, since prostratin belongs to a class of compounds—phorbols—that promote tumor growth. So the NCI decided to see if it had any potential as an AIDS drug.

Bingo. NCI researchers discovered prostratin counteracted one of the most insidious strengths of the HIV virus—its ability to lie dormant in cells and thus survive virus-killing medicines. Current AIDS cocktails knock a patient's viral load to nearly nothing; but as soon as a patient stops taking the cocktail, dormant HIV viruses leave the cells and spark a new bout of AIDS. Prostratin flushes out the virus, so the cocktail can kill it.

The NCI and Cox share a patent on prostratin for use in AIDS treatments, which has been licensed to the nonprofit AIDS Research Alliance of West Hollywood, Calif. The Alliance will put prostratin through three phases of human trials. It hopes to find a pharmaceutical partner after Phase I is completed sometime next year. Inspired by Cox's Falealupo Covenant, the Alliance has signed a contract that would give the government of Samoa, the village of Falealupo and its healers 20% of any profits. So far it has made a $5,000 good faith payment and has agreed to pay an additional $70,000 when and if the drug passes its Food & Drug Administration trials.

Cox can't promise that the corporate partners needed to bring prostratin to market will share their profits with the Samoans, but he hopes they will, and that his covenant will serve as a model for fair dealing. "It would go a long way," he says, "toward helping drug companies improve their tense relationships with developing countries."

As Cox waits for prostratin to worm its way through FDA trials, he's turned his attention to neurodegenerative diseases like ALS and Parkinson's. He believes that a mid-20th century spike in ALS cases among the Chamorro tribe of Guam can be explained by their consumption of a bat that dines on the poisonous cycad tree. By 1978 the Chamorro had hunted Guam's bats to extinction and started to import bats from cycad-free Falealupo. ALS cases immediately declined. Cox is studying the cycad-ALS link with neurologist and writer Oliver Sacks.

In 1997 Cox published his memoir *Nafanua: Saving the Samoan Rain Forest*, winning the Goldman Environmental Prize ($37,500) for work described in the book. Through a foundation, that money, too, has gone to Falealupo's villagers, who have used it to maintain the aerial hiking trails that draw ecotourists from around the world.

*For more information on Falealupo and how to get there, visit forbes.com/falealupo.*

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# The Warlock of Menlo Park

## Thomas Edison—villain? The shocking story of his effort to promote death by electrocution.

**BY SUSAN ADAMS**

THOMAS EDISON REMAINS ONE OF America's heroes, both in business and in popular history. With his incandescent lightbulb he turned night into day. He invented the stock ticker, the phonograph, the motion picture camera. His laboratory in Menlo Park, N.J., was famously fecund.

He was also, it turns out, an angel of death. It's thanks to him that today ten states (down from 26 in 1949) permit use of the electric chair on criminals. In sociologist Richard Moran's morbidly fascinating new book, *Executioner's Current* (Knopf, $25), this dark side of Edison comes vividly to light.

The prelude to Moran's story—the so-called battle of the currents—is well known: By the mid-1880s Thomas Edison and George Westinghouse were at war to see which method of power distribution would prevail. Edison favored direct current (DC); Westinghouse, alternating current (AC). Direct current, in which electrons flow in only one direction, worked fine over short distances but was problematic for the long haul. To send power miles away without huge line losses demanded that electricity be stepped up to a high voltage, then stepped down again at the receiving end. In an AC system such conversions needed only transformers, which were cheap and efficient. Transformers for DC, however, did not exist.

Nikola Tesla's invention of the electric induction motor in 1883 only strengthened AC's industrial dominance, since the motors ran only on AC.

Edison mounted a legal challenge, filing 11 suits that claimed Westinghouse had infringed on his patents. A confident Westinghouse remarked, "It is all bunkum on their part." The courts agreed. So Edison upped the ante, claiming that high-voltage AC had killed innocent people. He put out pamphlets, planted news stories and inveighed publicly against AC.

It wasn't enough to stop the superior technology. So Edison found another way to undermine his competitor. A commission appointed by the governor of New York was studying alternatives to hanging as a means for killing criminals. Edison sent word to the commission that although he would like to see capital punishment abolished altogether, death by electrocution was the most humane method—and AC the preferred current.

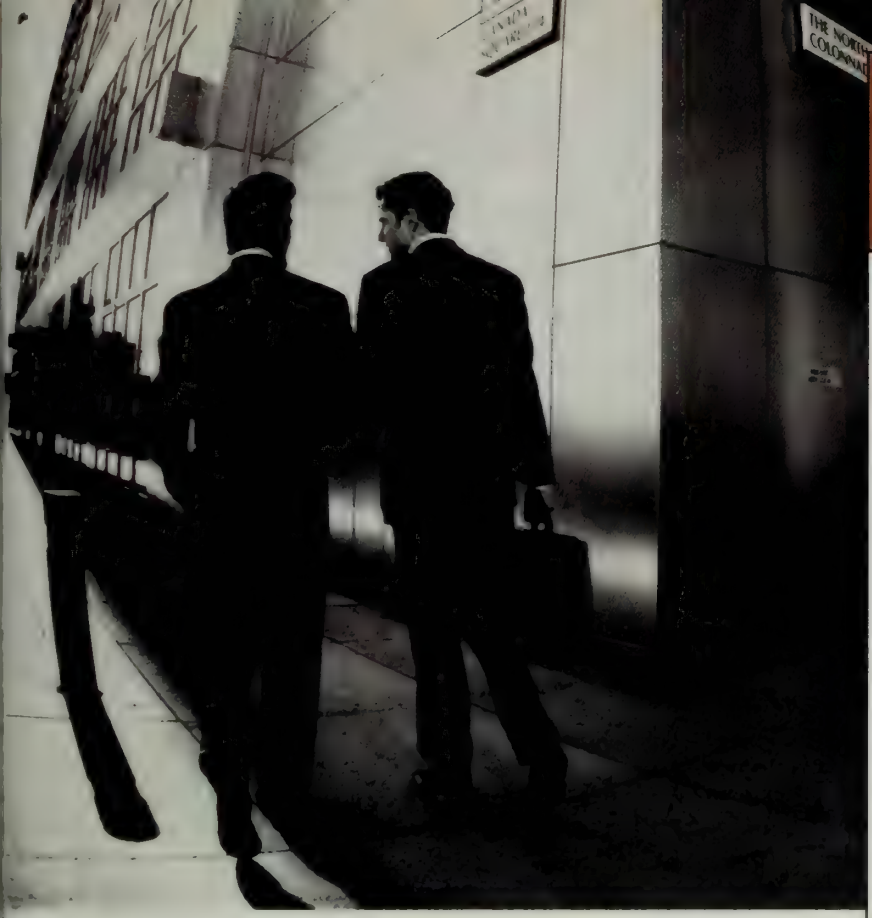
You light up my life: Old Sparky, a 1923 chair.

Harold Brown, a 31-year-old self-taught engineer, asked if he could conduct experiments at Edison's lab. Edison happily complied. In a series of gruesome displays, Brown killed dogs and then a horse using alternating current. Eventually Brown helped promulgate specs for a human-killing chair.

Westinghouse, meanwhile, did not sit idly by. He attacked Brown in the press and refused to provide him with an AC generator. But Brown, working with Edison, got three used Westinghouse generators through a dealer in Boston. Their chair was ready for its first victim: William Kemmler, a Buffalo man who had murdered his wife with a hatchet. Though Kemmler had confessed to the crime and had said publicly he was prepared to die, Westinghouse secretly financed an all-out legal effort to win a stay of execution, challenging the constitutionality of electrocution. The U.S. Supreme Court's 1890 decision not to hear Kemmler's appeal is still cited as proof that electrocution is neither cruel nor unusual.

The most vivid part of Moran's book is his account of Kemmler's execution, which was horribly botched. Two blasts of 1,300-volt AC coursed through the prisoner's body. The second lasted nearly four minutes, until the smell of burning flesh filled the room. Moran speculates Edison bribed the reporter whose newspaper, next day, ran the headline: "Kemmler Westinghoused."

Edison may have won the battle, but until recently he appeared to have lost the war. AC continued its dominance, and in 1892, under pressure from financier J.P. Morgan, Edison merged his company with AC purveyor Thomson-Houston, thus forming General Electric. Today AC remains the current of choice, since it converts easily to different voltage levels. But DC has lately battled back. It powers TV sets, mobile phones, computers, any sort of contained electrical device, of which there are more all the time. Scientists are striving to develop superconducting wires for power transmission. If and when they do, there is a chance DC could become the preferable current for long distance. In engineering as elsewhere, it ain't over till it's over. F



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*Give the neighbor's kids an inch and they'll take a yard.*

—HELEN CASTLE

*Your neighbor is the man who needs you.*

—ELBERT HUBBARD

*The good neighbor looks beyond the external accidents and discerns those inner qualities that make all men human and, therefore, brothers.*

—MARTIN LUTHER KING JR.

*It is discouraging to try to be a good neighbor in a bad neighborhood.*

—WILLIAM CASTLE

*Good fences make good neighbors.*

—ROBERT FROST

*Love your neighbor, yet pull not down your hedge.*

—ENGLISH PROVERB

*Every man is the architect of his own fortunes, but the neighbors superintend the construction.*

—GEORGE ADE

*Mix with the neighbors, and you learn what's doing in your own house.*

—YIDDISH PROVERB

*Keeping up with the Joneses was a full-time job with my mother and father. It was not until many years later when I lived alone that I realized how much cheaper it was to drag the Joneses down to my level.*

—QUENTIN CRISP

*Nothing makes you more tolerant of a neighbor's noisy party than being there.*

—FRANKLIN P. JONES

When courting his future wife:
*I would worship the ground you walk on, Audrey, if you only lived in a better neighborhood.*

—BILLY WILDER

*If you want to hear the whole truth about yourself, anger your neighbor.*

—GERMAN PROVERB

*People have discovered that they can fool the Devil; but they can't fool the neighbors.*

—EDGAR WATSON HOWE

## A Text...

***Forbearing one another, and forgiving one another, if any man have a quarrel against any: even as Christ forgave you, so also do ye.***

—COLOSSIANS 3:13

Sent in by Jack Darcy-Hennemann, Kirkland, Wash. What's your favorite text? *The Forbes Book of Quotations: Thoughts on the Business of Life* is given to senders of Bible texts that are used.

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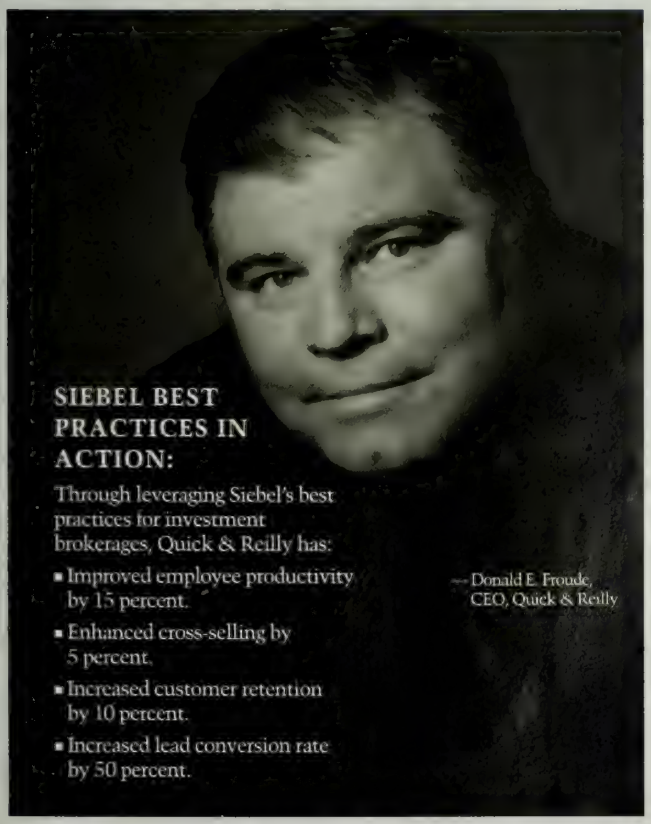


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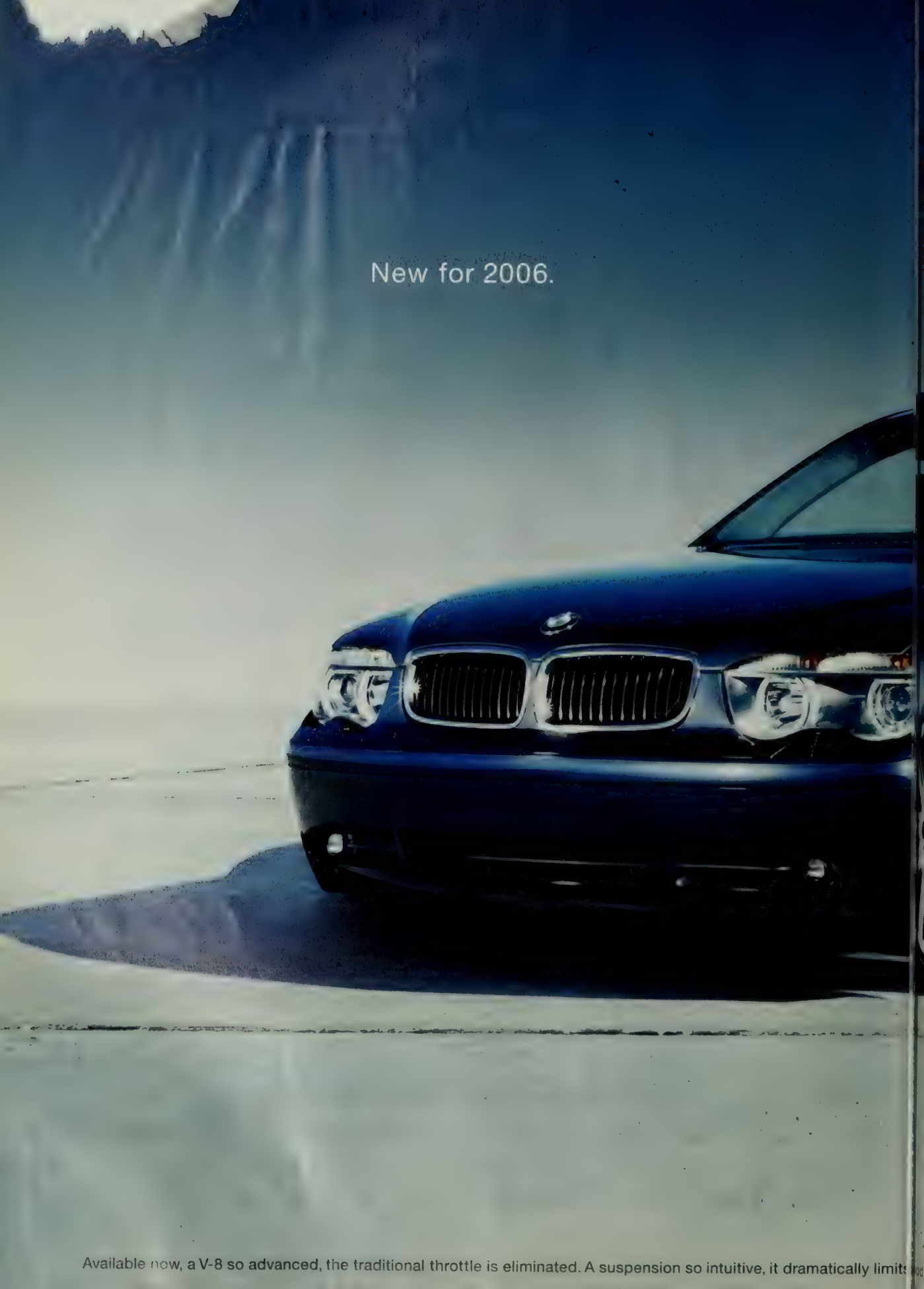


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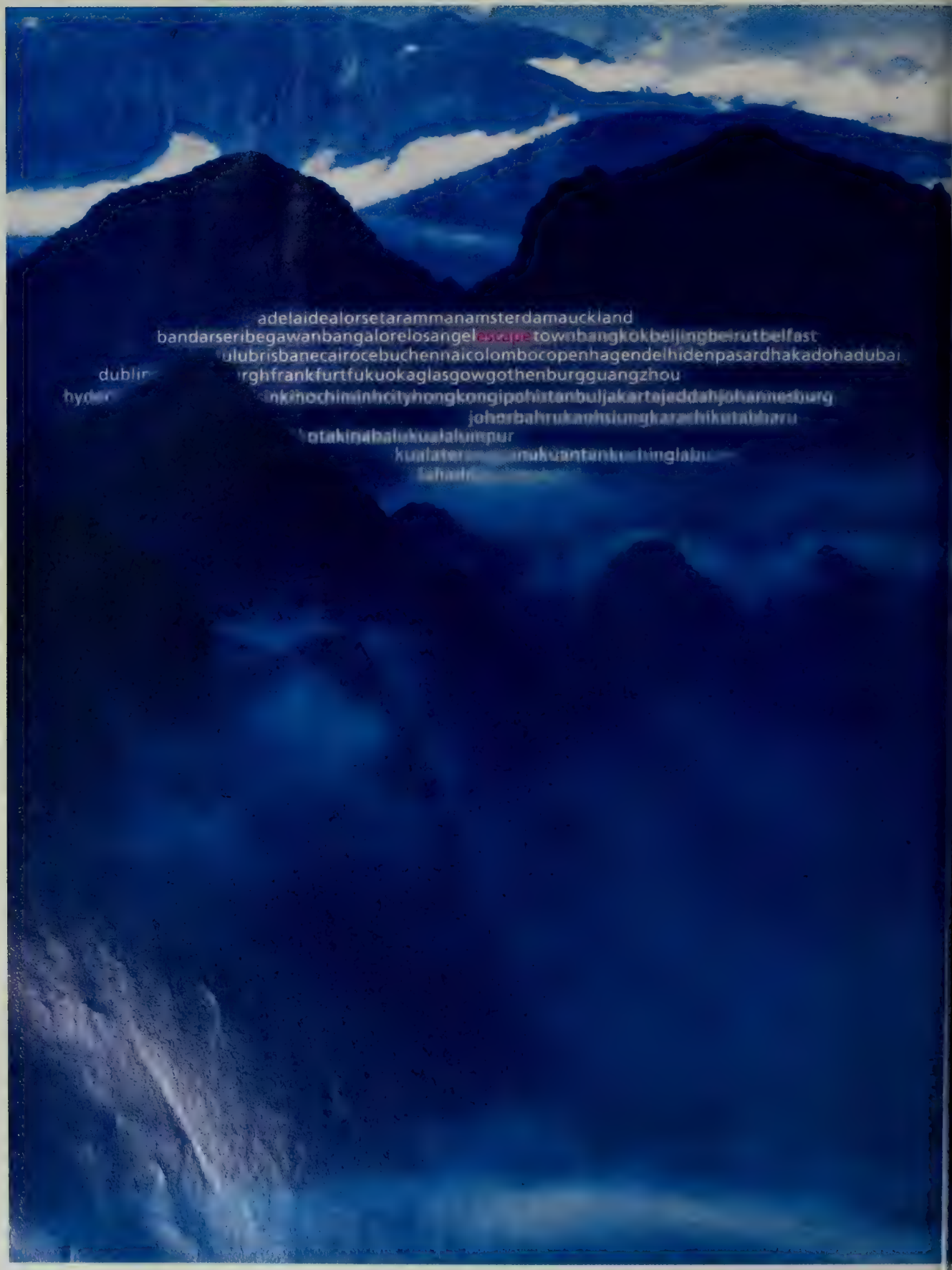


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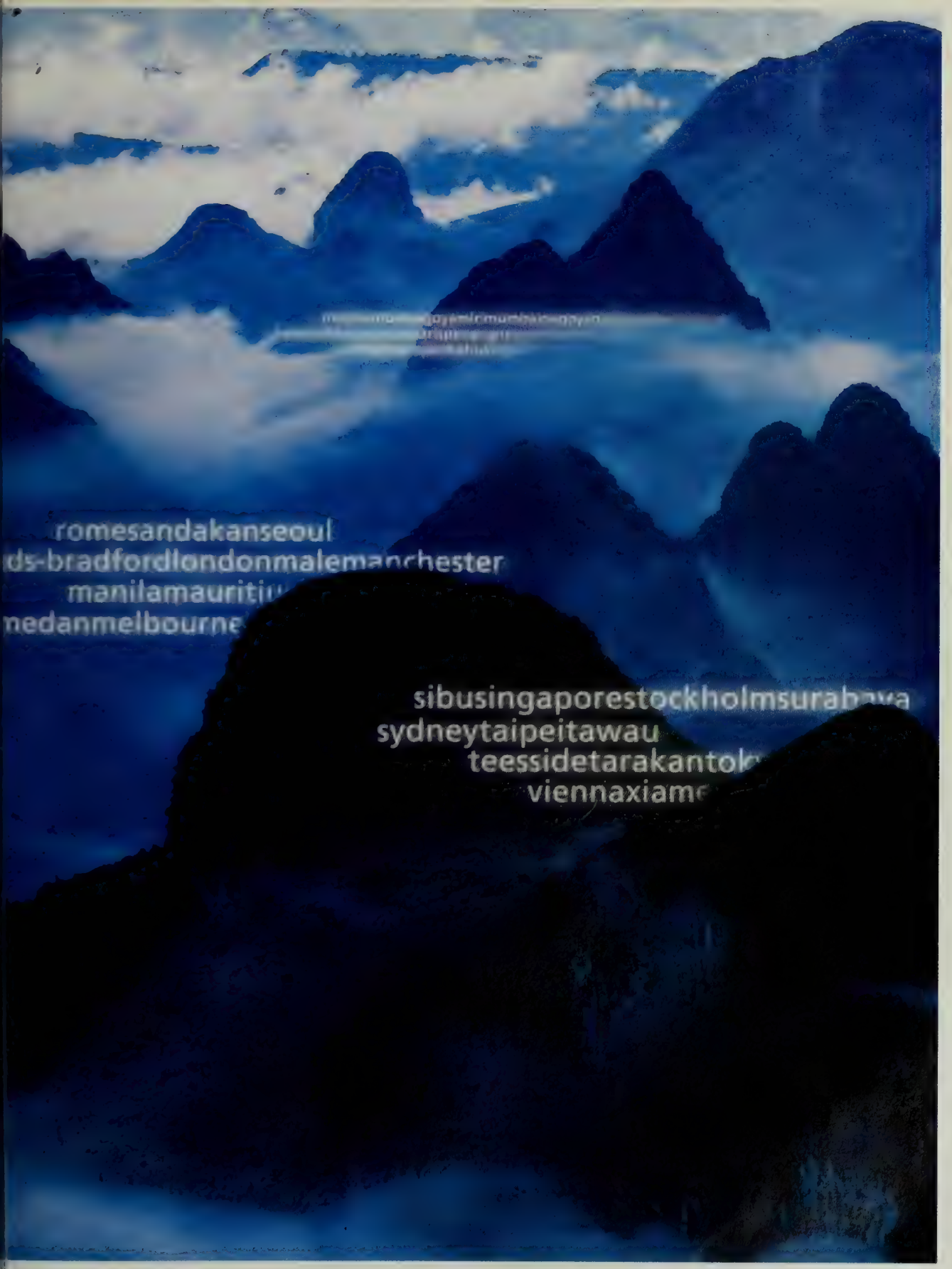


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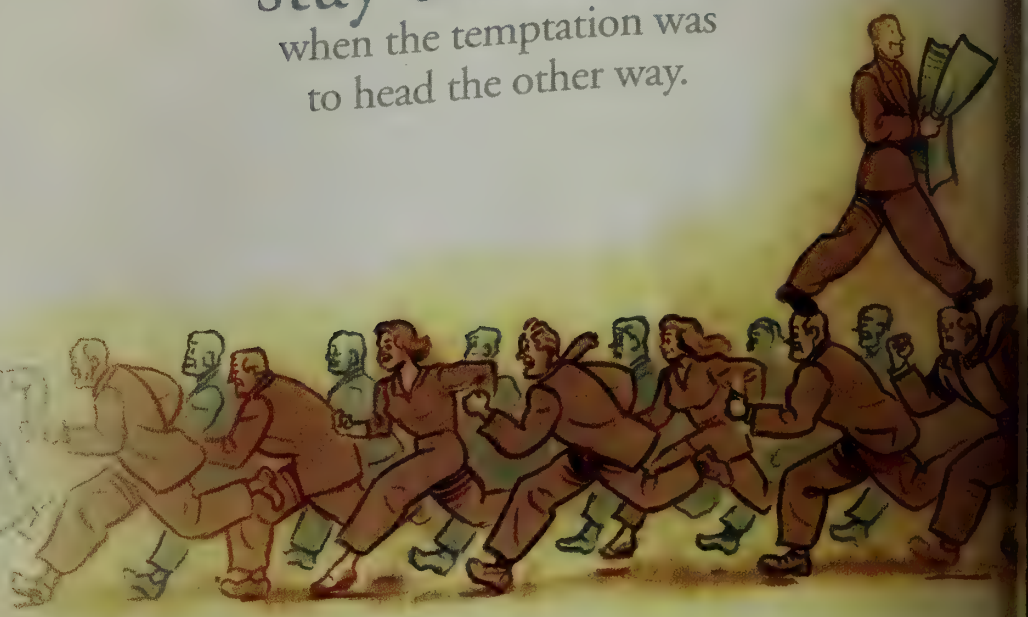

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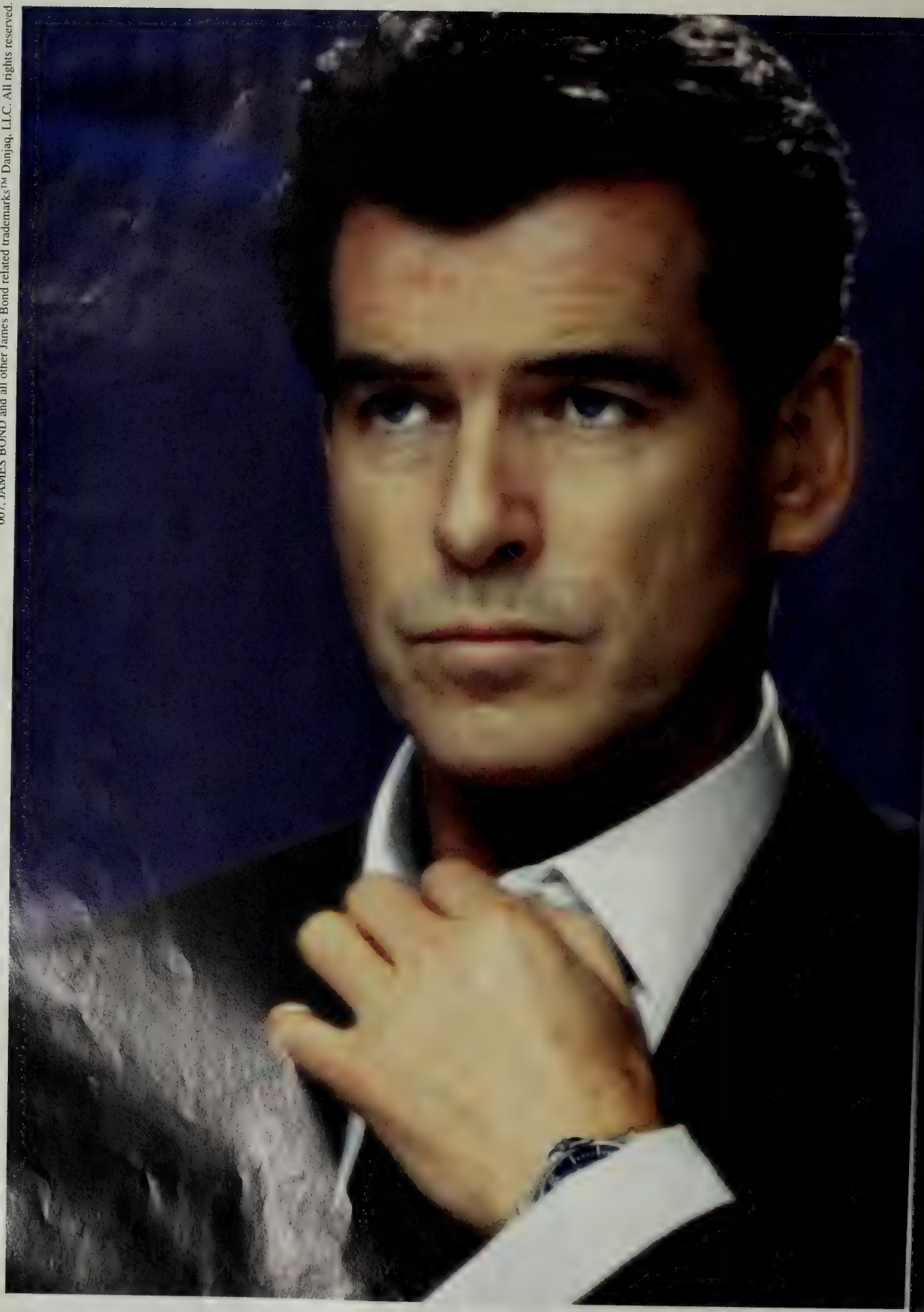

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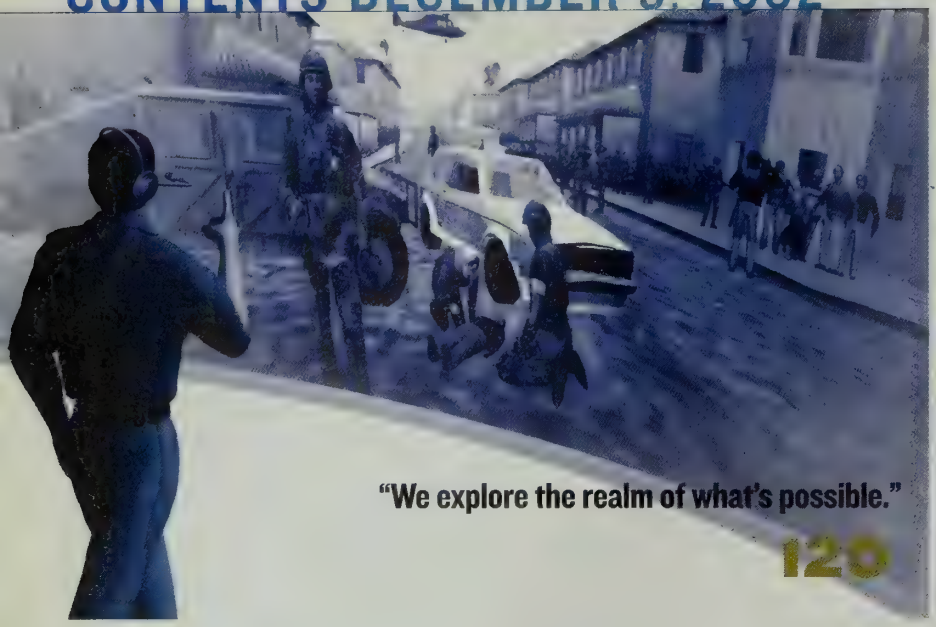

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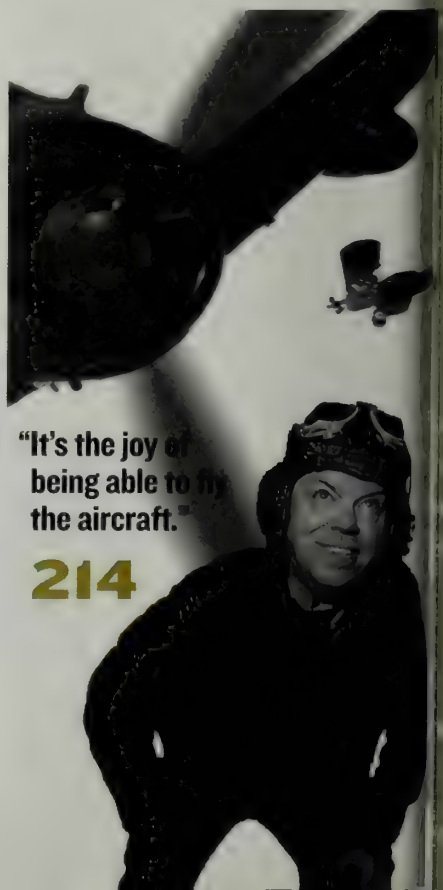

**"It's the joy of being able to fly the aircraft."**

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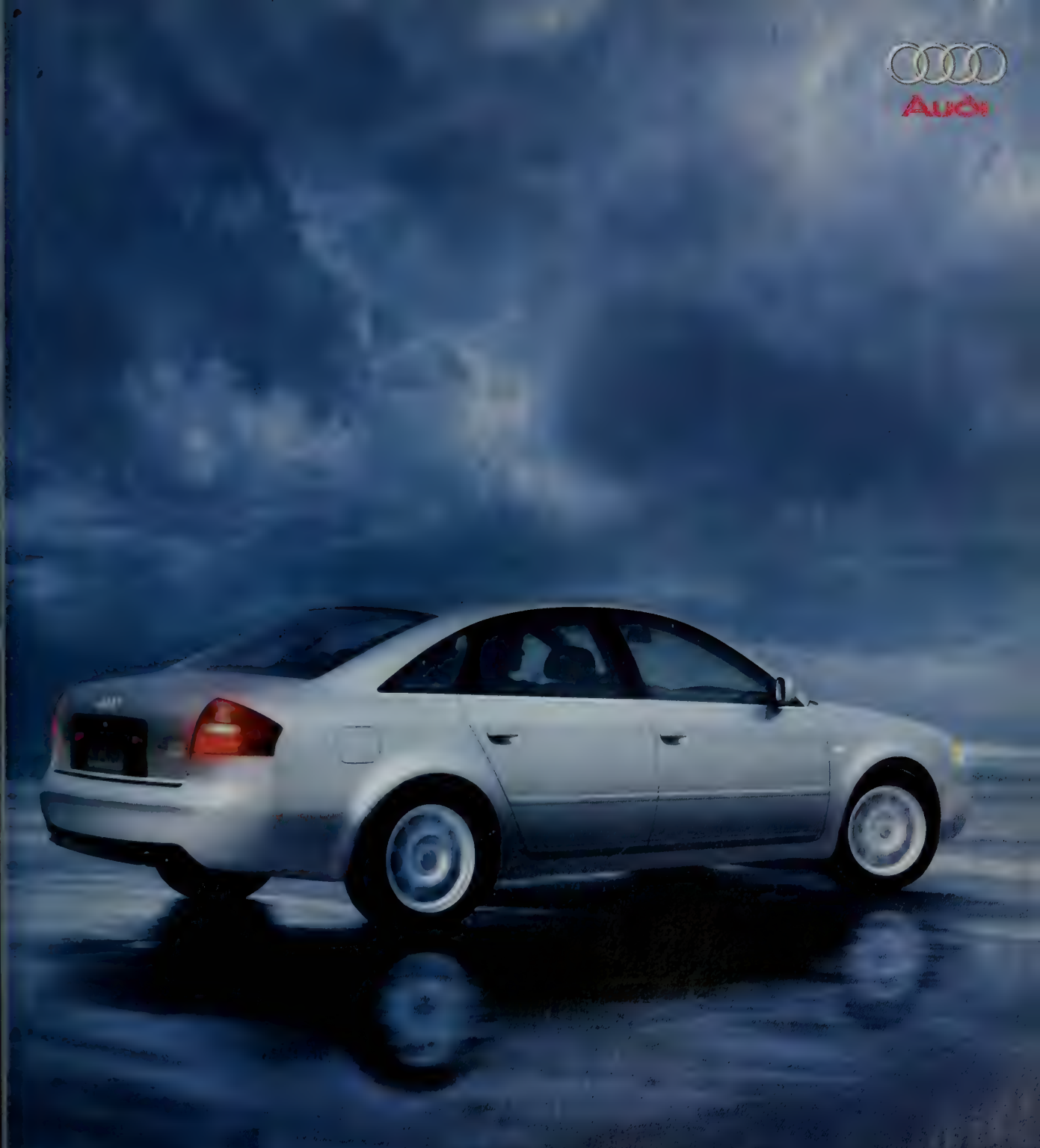


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## SIDE LINES

**E Pluribus Mishmash** The Founding Father would be appalled. The line of demarcation they so carefully drew between federal and state power has been breached. We now face the prospect that various rogue states, getting into the securities regulation business, will extract extortion payments from Merrill Lynch and all the other big brokerage firms. See page 72 for Michael Freedman's story on the runaway attorney general from New York.

At the same time, federal incursions onto local turf have grown to outlandish proportions. Roger Pilon of the Cato Institute notes that a mere three mentions of crime in the Constitution have blossomed into 3,000 federal criminal statutes and perhaps 300,000 regulations with criminal sanctions.

It is time for a truce to be called and for the legal borders to be redrawn. Here's a short list of statutory changes that would keep the states off federal territory and vice versa.

Securities law should, by congressional preemption, be cleared of state involvement. No longer would we have a state decreeing (as Massachusetts once did) that Apple Computer shares are overpriced and therefore cannot be held by its citizens.

Antitrust law should be similarly cleansed. State attorneys general would have to give up their dream of forcing Bill Gates to rewrite his operating systems 50 different ways to please them.

We should end the charade that says there is a "local" phone business and that it is separate from the "interstate" phone business. Get the states out of telephone regulation.

Maybe Congress will get around to reforming tort law—after a jury in Alabama, desiring to enrich fellow Alabamans and teach Northerners a lesson, awards $300 billion in punitive damages against General Motors for leaving a scratch on a fender.

If the states are to have their appetites curbed, it is fair to shrink the federal government, too. Federal enforcement of environmental laws should extend only to cases where poison leach across state lines; otherwise, let New Jersey tell Tony Soprano where to put his waste drums. The citizens of San Francisco want marijuana legalized as a medical treatment; John Ashcroft should stay out of this affair. Sexual harassment is a terrible thing, but it no more impedes interstate commerce than does rape or carjacking; let the states stop it. Finally, let's fold the U.S. Department of Education, as candidate Ronald Reagan nobly proposed. The money spent on its 4,615 bureaucrats could be better spent by the states on teachers.

William Baldwin
EDITOR

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# READERS SAY

## Personal Accounting

I take exception to your depiction of Barry Melancon as "hanging on" as president of the AICPA in "The Man With Nine Lives" *(Nov. 25, p. 60)*. He is supported by the AICPA board. I spoke with CPAs at last month's meeting attended by nearly 50% of our membership. They don't see Melancon as "hanging on." They appreciate his advocacy and laud his efforts. FORBES has chosen to focus on the perspectives of 160 petition signatories out of the AICPA's 350,000 members. Absent also from your analysis is any counterweight to the opinions expressed by Arthur Levitt and Lynn Turner, whose views of Melancon have long been prejudiced by Melancon's willingness to differ with their views in the course of representing AICPA members. That doesn't give FORBES license to assume that 350,000 CPAs agree with Levitt's opinion about the quality of leadership in their professional association.

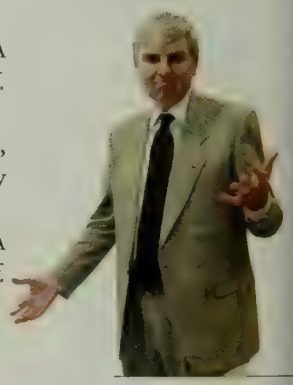
WILLIAM F. EZZELL
*Chairman, American Institute of Certified Public Accountants*
*New York, N.Y.*

The present AICPA leadership and management bear a huge part of the blame for what has been allowed to happen to the profession. Last month the AICPA council met in Maui, effectively with all the expenses paid. Remaining on the AICPA council ends up being the main objective of the appointee rather than the effective governance of the AICPA.

ANDREW B. BLACKMAN, CPA
*New York, N.Y.*

The demonstrated arrogance of not only Melancon, but also the others that surround him, defies my sensibilities.

THOMAS N. TONE, CPA
*Westlake Village, Calif.*



## Mislabeled

"Food Fight" *(Nov. 11, p. 56)*, about a new line of Quorn-brand fungus-based fake meats made by Marlow Foods, intentionally omits relevant information and misstates facts. You might have informed readers that Quorn's packages claim that its key ingredient is "mushroom in origin." Sounds good, but that ingredient is actually a single-celled fungus fermented in vats. The company is negotiating changes with the Food & Drug Administration. You claim Quorn is "healthy." Indeed, most Quorn products are much less fatty than ground beef, though its Fettuccine Alfredo version provides half-a-day's worth of saturated fat. The hundreds of adverse reaction reports that CSPI has supplied to the FDA demonstrates that Quorn foods cause as many as several percent of consumers to vomit, have diarrhea or experience difficulty breathing. You assert that CSPI criticizes Quorn because we're somehow in league with a competitor, Gardenburger (which uses real mushrooms). CSPI has praised several brands of veggie burgers and countless other foods. Once, we even commented favorably on the nutritional quality of some of the Quorn foods before we realized how sick they made some consumers.

MICHAEL F. JACOBSON
*Executive Director*
*Center for Science in the Public Interest*
*Washington, D.C.*

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Gardenburger's only objective relative to Quorn and its claim that its ingredient mycoprotein is "mushroom based" is to correct what we see as a deceptive labeling claim. You describe Gardenburger as a moneylosing substitute-meat maker when, in fact, the company generated $5 million in operating income in fiscal 2002.

SCOTT WALLACE
*Chairman, Gardenburger*
*Portland, Ore.*

## Class Dismissed

I wouldn't regard teaching ethics in business school as a complete waste of time as suggested in "Oxymoron 101" *(Oct. 28, p. 160)*. But it has been my observation that if a person doesn't learn about right and wrong as a child, he or she probably never will. My father advised me 60 years ago that if you sent a thief to college, all you got was a more proficient thief.

ROBERT E. GEHRT
*Glen Ellyn, Ill.*

## Market Multiples

It may be that no successful trading rule can be built around P/E ratios, as argued in "The P/E Myth" *(Nov. 11, p. 174)*. But neither can a rational market sustain multiples as high as 28 or as low as 8. It may simply be the case, as put by John Maynard Keynes, that "markets can remain irrational longer than you can remain solvent."

OSCAR FRICKE
*Mission Viejo, Calif.*

## Good Practices

I write in response to "Buried Treasure" *(Oct. 14, p. 54)*. Guernsey's financial services regulations have long been recognized by international authorities as being in the first division of international finance centers. The island is not a "foreign haven" or place "to park ill-gotten gains." Guernsey recently signed a Tax Information Exchange Agreement with the U.S. government, and the U.S. Internal Revenue Service has also approved Guernsey's know-your-customer procedures.

J.V. BRIDLE
*Chief Executive,*
*Guernsey Promotional Agency*
*Guernsey, U.K.*

## Lazy Doctors

As a practicing physician, I really must take exception to statements made in "Physician, Wash Thyself" *(Nov. 11 p. 40)* that place part of the blame for lack of doctors' hand washing on HMOs. Managed care is to blame for much of medicine's current woes. However, it is simply laziness and not time constraints that prevents one from taking a few extra seconds in order to help prevent the spread of infection.

JEFFREY O. BERMAN, M.D.
*Armonk, N.Y.*

## Due Process

"The Great Dividend Heist" *(Nov. 11 p. 46)* states that "in July the court ruled Grace was technically insolvent years before its 2001 filing." No court has ruled that Grace was insolvent in years prior to their bankruptcy filing. A trial to review Grace's solvency is currently set to begin on Dec. 2.

CHIP COOL
*Director of Corporate Communications*
*Sealed Air Corp.*
*Saddle Brook, N.J.*

## Union Busting

"Labor's Lingering Monopoly" *(Nov. 11 p.112)* is incredibly one-sided. Its underlying theme seemingly blames labor unions for all the economic problems of this country. In this day and age of corporate malfeasance and downright the by our nation's management, it's amazing how you can place blame on people's desire to protect their jobs or improve the conditions under which they work. I agree that it would be great if there were no need for a union, but wake up and look at what's going on around you. Just as our government needs it, the workplace also should have a system of checks and balances that unions may help facilitate.

DOUG BOYE
*Atlanta, G*

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# FACT AND COMMENT

By Steve Forbes, EDITOR-IN-CHIEF

*"With all thy getting get understanding"*

## North Korean Conflict

WHILE THE WORLD FOCUSES ON IRAQ AND AL QAEDA, THERE IS A dangerous crisis brewing on the Korean peninsula. Earlier this year President Bush rightly labeled North Korea as part of the "axis of evil." This regime, which lets millions of its people starve while it pours money into military programs, has acknowledged secretly working to make nuclear weapons. This rogue state brazenly violated the 1994 Agreed Framework it signed with us to halt its nuclear program in exchange for nuclear-power-reactor technology and fuel oil. Thankfully, the U.S. has ordered a tanker carrying 42,000 metric tons of heavy fuel oil to North Korea to turn around. Still, Pyongyang's dictator, Kim Jong Il, thinks he can shake down the West for cash in exchange for empty promises.

We and our allies should make it clear that there will be no further assistance until stiff conditions are met: The North must actually dismantle—under international supervision—its uranium enrichment program; give us a list of all illicit imports for this effort that it's received from Pakistan, Iran, Russia and elsewhere; and halt the sales of missiles and other weapons to other rogue states such as Iran and Iraq. To drive home the need for North Korea to cease and desist, we should step up military exercises with South Korea in the region, in addition to halting all flows of money to Pyongyang. China should be enlisted to reaffirm to the North how seriously we take its nuclear push and to reassure the North that if it were to truly pull back from this position, it would receive meaningful aid.

Clearly the Clinton Administration's notion that appeasement would persuade Kim Jong Il and his ilk to better behave themselves was a dangerous delusion.

## So Simple—Yet So Difficult

FORMER INTERNAL REVENUE SERVICE BOSS, CHARLES ROSSOTTI, says federal tax collectors are losing the war against tax cheats. The feds can't keep up with the increasingly sophisticated tax shelters and other tax-reduction and avoidance schemes, he complains. Like someone who has imbibed Washington's vapors for too long, Rossotti proposes adding nearly 30,000 new agents to beef up compliance and enforcement: "The tax system continues to grow in complexity, while the resource base of the IRS is not growing."

Why can't people like Rossotti see the obvious? The answer to the tax code's mind-numbing complexity is to dramatically simplify the code. Currently Washington is doing just the opposite. In the last five years Congress has enacted nearly 300 changes in the tax law. More enforcement? Nobody knows what's in the code. Who can make heads or tails of this: *"Line 20b(1).—You must complete this line if there is a gain on Form 4797, line 3; a loss on Form 4797, line 12; and a loss on Form 4684, line 35, column (b)(ii). Enter on this line and on Schedule A (Form 1040), line 22, the smaller of the loss on Form 4797, line 12; or the loss on Form 4684, line 35, column (b)(ii). To figure which loss is smaller, treat both losses as positive numbers."*

We should junk the code and start over. Replace it with a simple, single-rate system that has generous exemptions for individuals. Under the proposal I proffered on the presidential campaign trail, a family of four would pay no federal income tax on its first $36,000 of income and only a flat 17% rate on amounts above that. No death tax. No capital gains tax. No double taxation of dividends. Businesses would no longer be plagued with depreciation schedules—investments could be expensed immediately. If there's a tax loss, carry it forward. And there wouldn't be all that impenetrable underbrush that makes Enron-like accounting shenanigans possible.

What are we waiting for?

## Stalin-like Contests

TWO SCANDALS PLAGUE OUR ELECTIONS. ONE IS VOTER FRAUD; the other, gerrymandering. The latest abuse involves questionable balloting in South Dakota that swung the election to the incumbent Democratic senator. But the problem is widespread. Political operatives cast absentee ballots in the names of those who are incapacitated in nursing homes. Millions of people are on registration rolls, including illegal aliens, who shouldn't be. Hundreds of people in 2000 voted in both New York and Florida. Gross election law violations on Election Day 2000 were exposed in St. Louis. And on and on it goes.

At the very least, voters should be required to show identification. Yet even this straightforward idea rouses intense opposition from Democrats. With a straight face they say that having to provide ID would discourage low-income and minority voters. What really worries them: The move would help prevent fraud.

The other scandal is rigging congressional district lines to protect incumbents. Computers now enable pols to gerrymander districts to minimize competition. The worst example of this is in California. After the 2000 census, boundaries were redrawn to protect every incumbent, Democrat and Republican alike. One unintended competitive race cropped up when Gary Condit became embroiled in a national scandal. Only about 35 of the 435 congressional districts had genuine competition, and in 78 districts incumbents faced no major-party opposition. We

still have competitive gubernatorial and senatorial races because politicos haven't yet figured out how to redraw state boundaries—although the New Jersey Supreme Court may have provided an answer: Ignore the Constitution and the written law, and do what you want to do anyway.

While some other states supposedly had nonpartisan procedures in place for redrawing congressional and legislative districts after a census, Iowa seems to have been the only one that made that goal a reality.

Incumbents are also protected by our increasingly arcane, antichallenger campaign finance laws. Would-be opponents know that they must be ready to spend tens of thousands of dollars or lawyers and accountants alone. Federal law is enough to make any one think twice about running against an entrenched congressman One big irony: Our Founding Fathers thought the House of Representatives would be the most sensitive barometer of public opinion because representatives have to face the voters every two years.

What's the answer? Term limits, for one. Genuine campaign finance reform—you may give a candidate as much as you want a long as there is full, prompt disclosure—would also be helpful. Since judges like to make law these days, perhaps the Supreme Court could mandate that the Iowa approach be used in the other 49 states

# Cold Turkey?

TURKEY'S VOTERS RECENTLY GAVE A LANDSLIDE victory to a party with Islamic roots. Are ayatollah-like fanatics about to take over this critical country? Not at all. The party won because it was not connected to the economic horrors and government corruption that are currently plaguing Turkey. The biggest change the party may push for is allowing women to wear headscarves in public, if they so wish. Anything more, and the army will toss the party out in a nanosecond. An Iran, Turkey is not.

The Turkish lira collapsed last year—in no small part because of policy malfeasance on the part of the International Monetary Fund. As it has routinely done in other countries, the IMF tanked the Turks with its prescription for higher taxes and currency devaluation. The all-too predictable result: inflation and economic stagnation. Turkey would be in infinitely worse condition if it weren't for the fact that about half the economy already operates on the basis of the U.S. dollar.

**No ayatollah lovers here. Turks were disgusted with incompetent incumbents.**

We'll see if Turkey's new government, with the IMF hovering over its shoulder, can put together a sensible pro-growth agenda of tax cuts, currency stability and the peeling away of regulations that inhibit free enterprise.

# Part of the Process of Progress

FOR A FIRST-RATE, REASSURING PERSPECTIVE ON THE STATE OF corporate scandals, read John Steele Gordon's "Why Enron Always Happens: And how history shows it's actually good for us" in the current issue of *American Heritage*.

Free enterprise, reflecting all the glories and shortcomings of human nature, evolves rapidly, creating new opportunities—and new problems—that beget needed reforms and changes. The rise of the limited-liability corporation and a flood of new corporate laws in the 1800s are the most dramatic examples of this. "One of the most common progenitors of these financial manias is new technology," Gordon observes. Railroads cost investors prodigious amounts of money before Cornelius Vanderbilt figured out—some 30 years after railroads first appeared—how to run one at a profit. And that led to new rounds of overexpansion. "The Internet bubble of the 1990s was one more example of the all-too-human tendency to go overboard." The process of "excess, scandal and reform has continued unabated as the American economy has developed, enlarged and embraced an endless stream of new technology and new opportunities. It will continue on this path in the future." As long as the Eliot Spitzers of the world are eventually reined in

**The 1929 stock market crash led to the creation of the Securities & Exchange Commission.**

## RESTAURANTS: GO, CONSIDER, STOP

*Edible entertainment from our eatery expert Tom Jones and colleagues Patrick Cooke and Monie Begley, as well as brothers Bob, Kip and Tim.*

● **Pazo**—106 East 57th St. (Tel.: 752-7470). This is one of the most attractive restaurant spaces in town. Sad to report, that is the only good thing about it. The staff is condescending and haughty, and the food ranges from mediocre to bad. Cured king salmon with osetra caviar and horseradish crème fraiche is inedible; both the New York steak and the pan-roasted cod are so salty we left them on the plates. The chicken under a brick and the pan-roasted monkfish are okay, but nothing special.

● **Nam**—110 Reade St., near West Broadway (Tel.: 267-1777). This fun and clearly of the moment TriBeCa Vietnamese spot offers first-rate fare at reasonable prices. All is beautifully presented; the service is wonderful. Sharing is definitely the way to go. F

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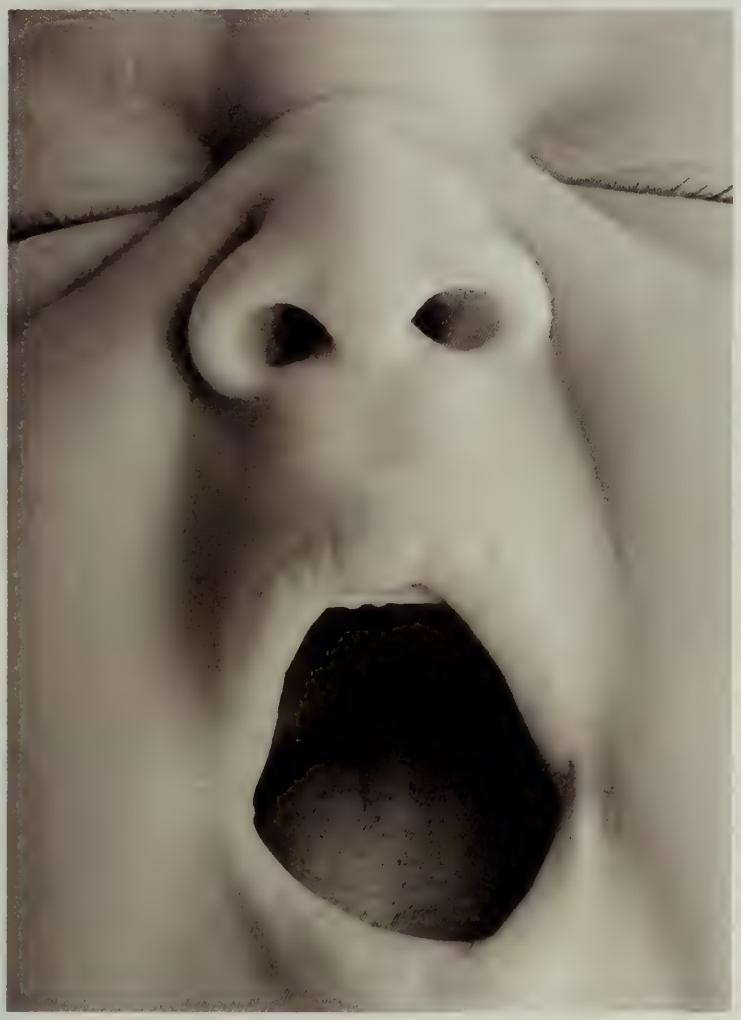

*Although some would tell you we also specialize in futures.

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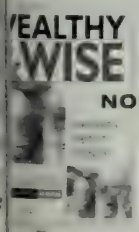


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—DANIEL WEBSTER

**Tax Cuts? *Da!*** There are two ways of increasing tax compliance. One is to create a more intrusive government by giving the IRS more power to snoop into our affairs. The second is tax reform. Ironically, America can learn much from Russia on this topic. Two years ago Russia decided to junk [its Western-style "progressive" income tax] and replace it with a 13% flat tax. The results have been spectacular: Inflation-adjusted tax revenues have jumped by nearly 30%.

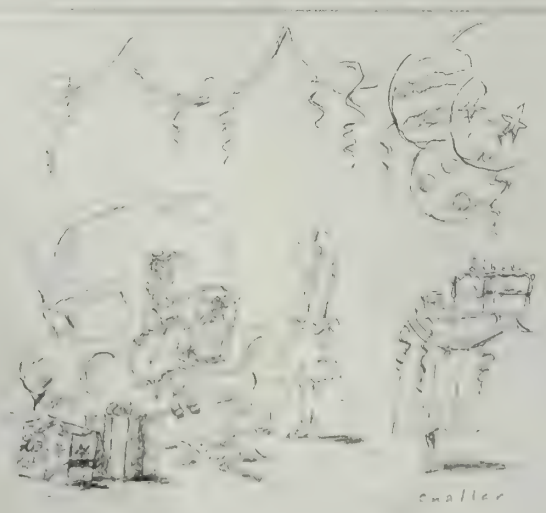
If former communists can implement a flat tax, maybe there's hope for the U.S. Congress. It certainly would mean less tax evasion, as lower tax rates and tax simplification reduce both the incentive to evade and the opportunity to avoid. And while it may not be good news for the thousands of IRS bureaucrats and the legions of well-paid tax lawyers, lobbyists and accountants, it would make life better for the American people.

—DANIEL J. MITCHELL, Heritage Foundation

**Tearful Good-Bye** Money talks, they say. All it ever said to me was 'good-bye'.

—CARY GRANT, as Ernie Mott in *None But the Lonely Heart* (1944 film)

**Protecting Pols** The magnitude of incumbency's triumph in last [month's] elections for the House of Representatives was so dramatic that the term "election"—with its implications of voter choice and real competition—seems almost too generous to describe what happened. Voters went to the polls, and they cast ballots, and they did so without coercion. Yet somehow, at the end of the day, 98% of House incumbents seeking reelection won—and by margins that suggest that many of the races were never serious.



*"Don't take her out of the box—she'll depreciate."*

A major reason for this acclamation of incumbents is the co ruption of the redistricting process eagerly entered into by bot parties. Redistricting, which redraws congressional districts fo lowing the census every decade, ought to be designed to make di tricts more competitive and to make incumbents more accoun able. Yet in practice, state legislatures proceed with two aims i mind—protecting incumbents from challenge and maximizin partisan advantage. Sometimes, the process is used to oust repr sentatives of the other party. More often, gerrymanders a designed to protect incumbents. Such districts then tend to ele members who are more conservative or more liberal than th populations of their states as a whole. The result: Congression delegations are divided ideologically and the center is weak.

—*Washington Po*

**Shortsighted** What soon grows old? Gratitude.

—ARISTOTI

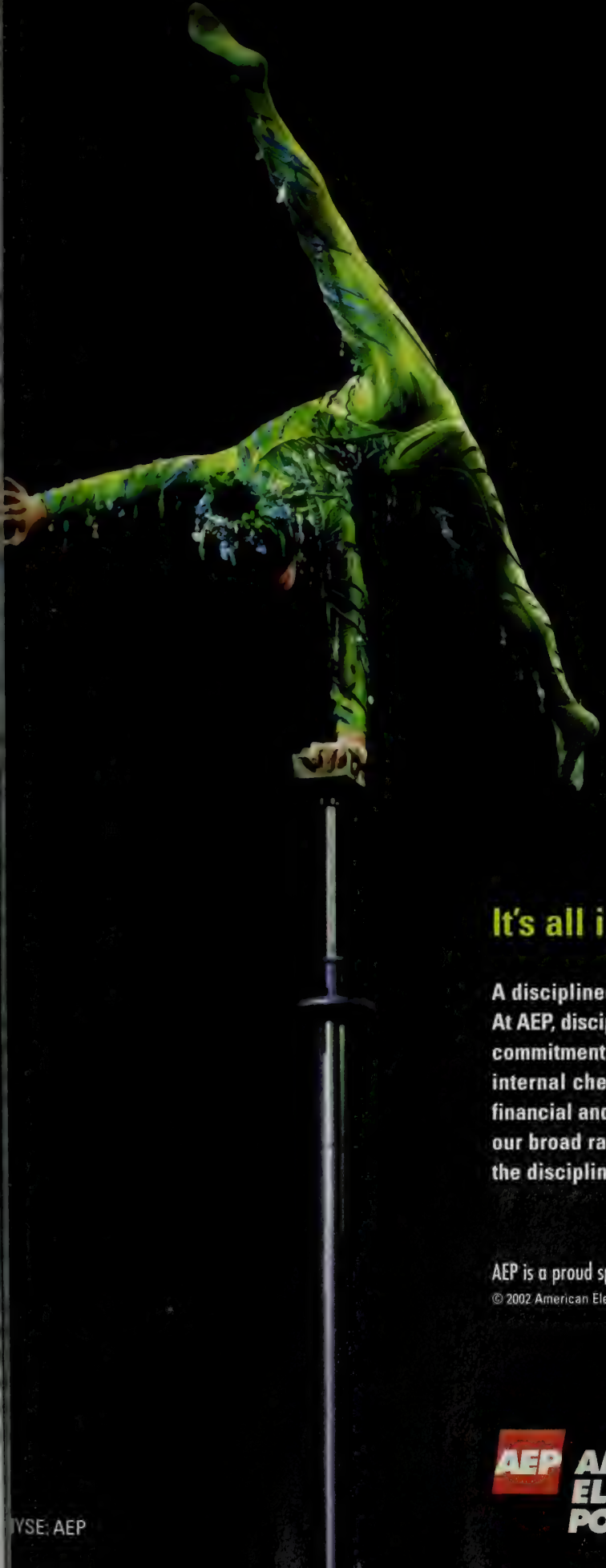
**Talking Turkey** An electoral earthquake sho Turkey's politics to its foundations [last month]. The Justice a Development Party—the third and least Islamist in a sequen of Islamist political parties—led with a third of the votes.

In the post-Sept. 11 environment, when the compatibility Islam and democracy has been questioned, the current Turki experiment is of utmost importance. If successful, Turkey will ha shown that secularism can indeed be liberal and tolerant—a that democracy can function properly in a Muslim environme Most of the responsibility to make the experiment succeed li with Turkey. Part of the responsibility, however, lies with the Eur pean Union, whose members have been achingly, at times insu ingly slow in accepting Turkey's bid for membership. Some of t European animus may be explained by a reluctance to have member state whose population is mostly Muslim. But this shou be seen as an immense opportunity for Europe. An invitation Turkey to start negotiations will consolidate the liberal politi changes that have gained such momentum in Turkey. It wou also begin reducing the so-called civilizational barriers betwe Muslim countries and the West. Here is a challenge for us all.

—SOLI OZEL, *New York Tin*

**Holiday Travel—Hooray!** Shawn B. McCuller federal air marshal accused of holding passengers at gunpo and arresting a man for "observing too closely," had be rejected by the Philadelphia Police Department in the m 1990s after failing a psychological test. In addition, he recei just two weeks' training before being put to work, according the *Philadelphia Inquirer*.

—CHARLES OLIVER, *Reason Online*

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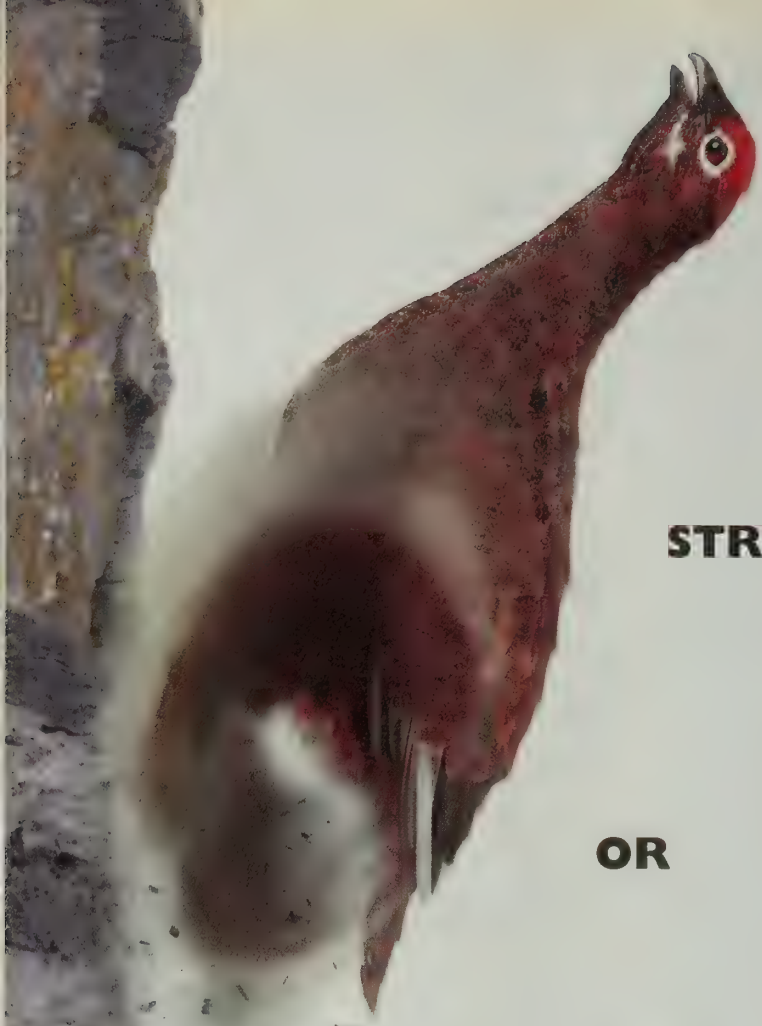

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By Caspar W. Weinberger, CHAIRMAN

# The 2002 Election and Other News

AFTER A MONTH OF STUDY, ANALYSIS AND REFLECTION ABOUT November's votes, it is clear that:

• Election 2002 was a historic victory for Republicans. Never before has an incumbent GOP president gained House seats in a midterm election. The net midterm gains in the Senate that restored GOP control there were also unprecedented.

Once again President Bush demonstrated the qualities that made him such a successful governor of Texas. He ordered that there be no gloating over the GOP victory. He reminded legislators that the American people want senators and congressmen to work together—to drop their past rancor and stop the delaying tactics.

The President then calmly went on to reiterate his highest priorities: improving security, which will require increased defense spending; establishing a Homeland Security Agency free of crippling obeisance to organized labor's demands; strengthening the economy by making stimulative tax cuts permanent; enacting legislation to encourage new job-producing investments; quickly securing the additional energy a strong economy requires; and putting a patient-friendly medical prescription plan in place.

President George W. Bush: Historic victory with no gloating.

• Voter turnout, which was supposed to favor the Democrats, worked the other way.

• The President's personal popularity remains high. He risked it by campaigning more rigorously than had most of his predecessors. The safe conventional wisdom required that he "stay above the fray." Had he done so, Mr. Bush would not now be a President whose party controls both the House and Senate.

• The Democratic agenda remains the same, but has far less chance of being enacted. The morning after the election Senator Tom Daschle, outgoing Senate Majority Leader, said President Bush's tax cut is "going to cost this government $5.5 trillion in the second ten years." But that $5.5 trillion is, of course, the people's money, and the Bush tax cut will enable many of them to keep more of their earnings. Tax revenues do not "belong" to the government.

• The Senate will finally vote on many of the President's judicial appointees. The Democrats had kept these nominations bottled up in committee because they feared the nominees were too conservative.

• It seems clear that, even though the country remains closely divided, voters created a Republican majority. This, despite massive campaign spending by the Democrats and their efforts, even greater than two years ago, to turn out the vote.

• The standard Al Gore class-warfare card ("*They* are rich, and *we* are poor, so *they* must be defeated"—presumably so that all can be poor)—failed as dismally in this election as it has before.

The best story of election night—although apocryphal—had Vermont Senator James Jeffords, who tipped control of the Senate to the Democrats last year by forsaking the party that elected him, emerging from a careful study of the results and announcing that after prayerful consideration (and to protect his precious chairmanship of the Environment & Public Works Committee and his milk subsidy), he had decided to switch back to the Republican side. He owed his decision, he presumably said, to his conveniently elastic conscience.

That puts one in mind of Winston Churchill's remark after he switched parties and then in the 1920s was reported to be thinking about switching back to the Conservatives. He said, "Anyone can rat, but it takes a certain amount of ingenuity to re-rat."

## Other Good News

• Oregon voters defeated a single-payer health care plan called the Oregon Comprehensive Health Care Finance Plan. The "single payer," of course, would have been the state government—i.e., Oregon's taxpayers. The plan would have had the state managing and paying for (with its citizens' taxes) all health care costs for everyone.

• In October our military, using advanced radar, sensor and "hit to kill" technology, intercepted and destroyed a target missile whizzing through space. This was the fourth consecutive successful test over the past year. Good news for those who believe we must develop and deploy an effective missile defense system. Incidentally, little media attention was paid to this success—but had the test been a failure, you can be sure the media would have reported it with great rapture.

## No Oil for the North

• The usual suspects were rushing to assure North Korea that despite its admitted violation of earlier promises, all would be well if it made additional worthless promises. Fortunately the President rejected this approach and, at least for now, stopped the oil deliveries we had been sending every month to the North. F

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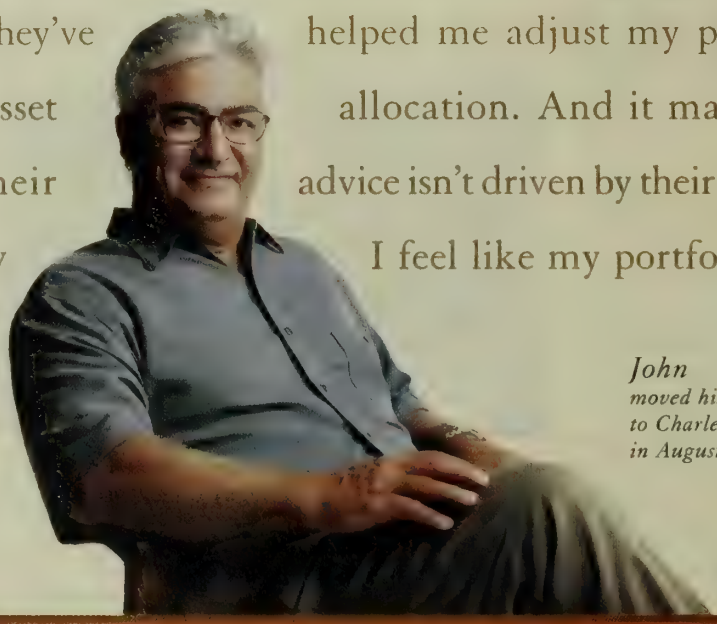

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By Rich Karlgaard, PUBLISHER

# Advice to Dems—Just Say Yes

RARELY DO I VOTE FOR A DEMOCRAT. WHY, THEN, DO I NOT FEEL ecstatic about last month's Republican rout? It reminds me of a horrible accident I once saw.

About a year ago I was driving on California's U.S. Highway 101, and some young idiot a few cars ahead of me kept jumping lanes. Suddenly this weaving fool clipped a big truck's rear tire. Over he went. The car flipped two times and slammed into a cement wall at 50mph. I called my wife on the car phone and said, "I just saw somebody die."

The party of Thomas Jefferson is on life support. The tanks are dry of positive ideas. Dems only know how to be oppositional. This can be very funny, of course; for example, watching James Carville's head turn purple on CNN. It was wild to see Dems chicken out on heart surgery and opt for a face-lift—i.e., Nancy Pelosi. But let's not drink too long from the stein of schadenfreude. It's not seemly, or good for the country.

## Turn the Tables

Most Dems are in denial about their one glaring, elephant-size flaw—a lack of positive ideas. Paul Krugman can't see it. Writing as spasmodically as ever in the *New York Times* on Nov. 8, he urged Democrats to take to the barricades and ... complain! You can't accuse Krugman of not knowing his base. Nationally, Dems have become the party of complaint. That is their core competency—saying "No," with just the perfect vintage of whine to go with it. "No" to economic stimulus. "No" to homeland security. "No" to school choice. "No" to your Chevy Suburban.

It never occurs to Dem operatives that "no" doesn't cut it in America. It never has. "No" runs counter to our national DNA. For the good of themselves and the country, Democrats need a big transfusion of "yes" spirit. A few ideas:

Completely disrupt the Republicans by saying "yes" to a flat tax. Can you imagine? In one stroke this would tar the Republicans as lap dogs for special interests. The Dems have always said that about Republicans—but never to much effect. This time the charge would stick to the Republicans like poo-poo on Vibram. It would take a generation to wipe it off. A flat tax is fully within the Jeffersonian principles of the Democratic Party. It is moral (a flat-rated tithe is referred to in the Bible's Leviticus) and populist. Everybody would pay the same rate! No billionaire would get to play the system with pricey legal help.

Don't carp about America's love of cars and SUVs. Say "yes" to smart alternatives. One of them is cheap broadband—megabits per second, $10 per month—enough to make teleschooling, telecommuting and teleshopping preferable to the gas hog. How? Blow the winds of the free market into the troubled telecom sector. You could propose abolishing the Federal Communications Commission entirely. Less radically, you could keep the status quo for bit traffic under 1 megabit per second but declare anything over that a new ball game—an unregulated ball game. Anyway, the idea of spectrum-based regulation of telecom is outdated. Digital bits can be, ought to be, regulated the way ships are on the ocean: Ships are free to go anywhere, as long as they don't bump into other ships. The same should be true of digital bits. So how about declaring America's airwaves a national resource, free to anyone who doesn't crash into other users? Now that's profoundly democratic! Doing so, you would ignite a commercial broadband boom that would put a halo on Dems for decades.

• Say "yes" to environmentalism—as you do now—but enlist the free market. Swap SUVs for broadband, as noted above. If you insist on following the Kyoto Protocol, then also insist on tradable pollution rights. Know that free trade with poor nations—whose people have to eat—is the best way to stop them from chopping down their rain forests.

• Say "yes" to science. You once gave us the Manhattan Project and the Tennessee Valley Authority. You deserve most of the credit for the early space program. But over the past two decades you have turned, oddly, against science. Part of this is your lethal embrace of the Greens, who in their most radical wings talk like the Unabomber. Your other flub was to hop into bed with trendy multiculturalism, which disparages science as a tool of Western oppression. Be honest with yourselves. How did you Dems go from JFK's science optimism to that? Your low point was reached with Bruce Babbitt, Bill Clinton's Secretary of the Interior. In the Kennewick Man case, Babbitt stopped scientists from doing forensic work on the skeletal remains of a 9,000-year-old man found in Oregon. The bones suggested the man was European—oops, can't have that. That was a Galileo moment in the church of multiculturalism. Dems flunked it.

• Let the Republicans court big corporations; you say "yes" to the little guys. This means you should support stock options, because they give entrepreneurs a powerful recruiting tool. Slash taxes on capital gains, because startups need more capital. Target the soft underbelly of the Bush Administration: its economic team. Led by Treasury Secretary Paul O'Neill, the instincts and habits of this team are 20th century at best, mercantilist at worst. They are most comfortable with big, regulated businesses—oil and aluminum cartels, subsidized agribusiness, etc. Real entrepreneurs have no particular friend in the Bush Administration. Go get 'em. F

*Correction: My error citing Marvin Davis in last issue's column (Nov. 25) on worst jobs.*

Forbes.com | Visit Rich Karlgaard's home page at www.forbes.com/karlgaard or e-mail him at publisher@forbes.com.

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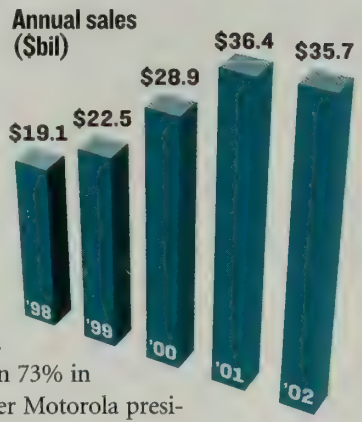
# Farewell to the Dennis Menace

Who can forget Dennis Kozlowski's $2,900 coat hangers? Or his company's massive charges, such as $2.5 billion for undersea cable? But Kozlowski, now under indictment, is gone from **TYCO INTERNATIONAL (I6, TYC).**




There's no doubt the conglomerate (electronics, medical supplies, plastic packaging, alarm systems) is a mess with bum Kozlowski acquisitions and accounting problems. Tyco lost $9 billion on $36 billion in revenue in the Sept. 30 fiscal year. Most of that was from writedowns, but operations are weak, too. Electronics revenue, for instance, was down 8% for the year.

Kozlowski, now under indictment

Now here's the contrarian case. Tyco is cheap, down 73% in 2002. The worst is over. The new chief executive, former Motorola president Edward Breen, has brought in Wharton professor Michael Useem to advise corporate governance. Breen restated earnings for three quarters and indicated no surprise restatements were coming. He is readying plans to tackle the company's $26 billion debt load through loan restructuring negotiations. Plus Tyco has $6.5 billion in cash. Analysts estimate fiscal 2003 earnings at a respectable $1.58 a share, albeit nothing like when mergers were plumping up its top line. Robert Hagstrom, portfoli manager of Legg Mason Focus Trust, says an economic turnaround will make Tyco a long-term winner. —*Emily Lamber*

## The Un-Google

A decent Internet stock? **OVERTURE SERVICES (23, OVER)** places its clients' advertising blurbs in the search results (for relevant topics) delivered by search engines like Yahoo and Microsoft's MSN. Though most other search companies besides Google look as if they're waiting to die, Overture's revenues through the first three quarters jumped 150%, to $468 million. And it makes money: Net grew 88% to $17 million for the quarter. Overture trades at an affordable 17 times trailing earnings.

Overture stock has fallen 75% from its glory days in late 1999. In addition to the Internet taint, Overture suffers from fears that privately held Google—the dominant force in the search field—will run it out of business. Not likely. Overture's business is based on selling shopping information, unlike Google's more general variety of search. Its 73,000 advertisers pay Overture when a user chooses the advertiser's offering.

Roger McNamee, a principal at investment firm Silver Lake Partners, argues that Overture is well positioned, thanks to its MSN business and a new deal with Yahoo Japan. —*Quentin Hardy*

## Blue Bloods

Founded in 1903 by three du Pont family members to manage their growing wealth, **WILMINGTON TRUST (30, WL)** has grown into a 45-branch regional bank and money manager to the rich.

But the corporate trust work is where the bank really shines, says William Fries, manager of the Thornburg Value Fund. Wilmington is trustee on more than 12,000 specialty setups like tax-advantaged Delaware business trusts and holding companies for customers like credit-card giant MBNA.

Wilmington's 15 P/E is close to S&P's bank index (14). It boasts a juicy 3.3% dividend yield. —*Christopher Helman*

## The Network's Down

And now for a bad tech stock. The leadin provider of info-tech services and net working software for universities and uti ities, **SYSTEMS & COMPUTER TECHNOLOG (IO, SCTC)** has rallied from its $6 Septemb low. For the fiscal year ended Sept. 30, Wall Street is focused more on the company's 14% revenue gain, to $238 million, than on its $9 million loss.

Too bad. Some funky things are goi on. Systems has the curious habit including what it calls "earned revenu in excess of billings" in its financi results, meaning bills that have yet to paid by, or even mailed to, customers. the end of the third quarter, for examp it had $39 million of these. The compa contends that it will be paid, as part multiyear contracts, because the cu tomers are rock solid. Short the stock a cover at $5.

—*Elizabeth MacDon*

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MOVING BUSINESS FORWARD

**By Edward G. Rogoff** ASSOCIATE PROFESSOR OF MANAGEMENT, BARUCH COLLEGE, CUNY; AND
**Hany S. Guirguis** ASSISTANT PROFESSOR OF ECONOMICS, MANHATTAN COLLEGE

# Legalized Price-Fixing

## How a government program to lower drug prices does the opposite.

PRICE-FIXING IS A CRIME—UNLESS THE GOVERNMENT ESTABlishes it as law, supervises it, helps maintain its secrecy, punishes companies that undercut prices and then becomes the biggest customer. This is precisely the system that exists for drug price regulation. The government calls it a drug price reduction program, yet it is a major culprit in causing price increases.

It started in 1990, when Congress required drug manufacturers to discount the price of drugs paid for by Medicaid and used by outpatients. It was later extended to Veterans Affairs hospitals and clinics, public hospitals, community clinics and federally designated hemophilia treatment centers. The specific rules are mind-numbing, but the discounts amount to between 11% and 15%. Administered by the Public Health Service, the program is referred to as the PHS Pricing Program.

We recently completed a study analyzing ten years' worth of data on the costs of drugs, looking specifically at 35 drugs used to treat hemophilia, manufactured by seven companies . We believe the effect of the law has been to raise prices, reduce competition and eliminate the power of large purchasers to bargain with drug manufacturers.

*"Drug companies can be penalized for making deals below the price set by the government. Imagine if this applied to carmakers."*

After the PHS law passed in 1992, but prior to its taking effect, clotting factor manufacturers raised prices dramatically. So much for that discount. Since this early price boost, drug manufacturers have moved in an uncanny pricing lockstep.

Among the more than 3,000 purchases studied, the relative position of manufacturer prices has changed only once (and that was temporary), indicating that manufacturers rarely or never use price to compete with one another. Before the PHS system, large purchasers like the hemophilia centers had the power to negotiate prices with manufacturers through competitive bidding. But under the PHS system, manufacturers can be penalized for making deals below the price set by the government. So manufacturers send purchasers a list of nonnegotiable prices.

The desire of pharmaceutical companies to maintain access to the Medicaid market, which accounts for 11% of drug purchases nationwide, and to other large government-funded markets, provides a powerful incentive to comply with PHS rules—and keep prices up. The PHS rules require pharmaceuticals to be sold to Medicaid and PHS markets at the lowest price charged anywhere in the non-PHS markets. Reduce one price to one customer and all prices to Medicaid and PHS markets have to come down. So big private sector buyers (like health care plans) can no longer negotiate good deals. They get stonewalled.

Imagine if car manufacturers had to comply with a similar system that required them to sell cars to the government at the lowest price they charged any private purchaser. There would be no more negotiating better prices with fleet purchasers or end-of-year discounts to move cars off the lot before the new model arrived. Manufacturers would scrap cars before they would cut prices and be forced to lower their price on the thousands of cars that are sold to the government. Yet this is precisely the system that exists for pharmaceuticals.

It is difficult to exactly measure how much this program has added to costs, because drug companies are bringing out more expensive products. But we estimate that the PHS program has increased prices of all drugs purchased under non-PHS by at least 15% and probably much more, without reducing the PHS prices paid. In the $1.5 billion clotting factor market, this is more than $225 million.

The high cost of the PHS system, including regulatory compliance and other bureaucratic management, is borne by health care providers, insurers and, ultimately, by consumers.

Drugs are expensive for lots of reasons, such as a lack of competition and high barriers to entry in the form of patents and capital costs. But as the Bush Administration and Congress ponder ways to reduce drug costs, they should consider a radical option: eliminating this government program supposedly designed to reduce prices and replacing it with a prescription for a healthy dose of free market economics.

Success is the result of hard work, courage and the occasional genius.

John F. Gifford
Chairman, President & CEO
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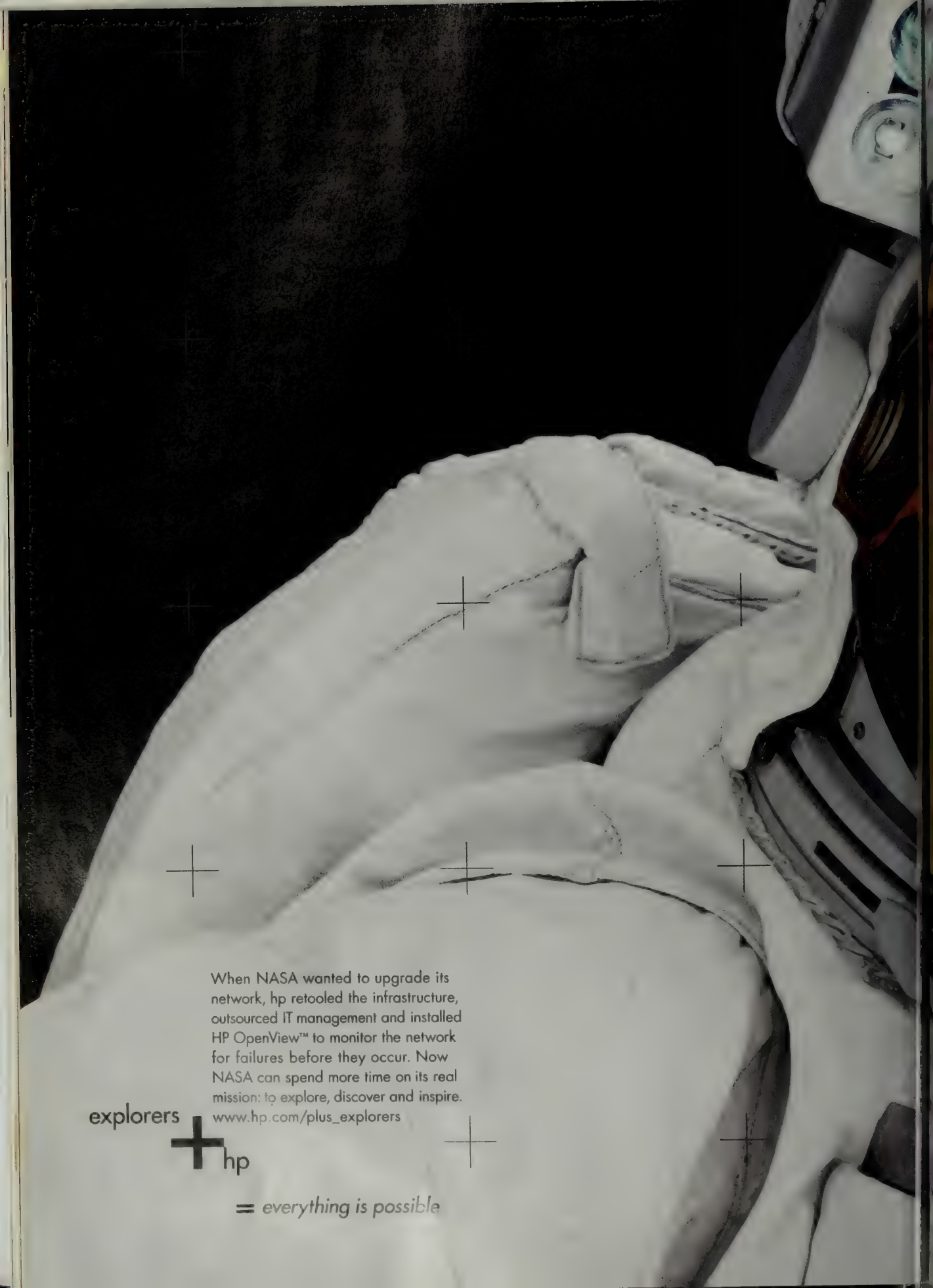
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MAY 28, 2001

# Deal Another Day

Bond girl Halle Berry.

When we placed Metro-Goldwyn-Mayer Chief Alex Yemenidjian on our cover, the studio was in the midst of a comeback. For the first time in years MGM films were debuting at number one, the studio had a full slate scheduled for release and the stock had climbed from $12 to $19 over a two-year period. But since then the stock has sagged as box office results sputtered. Surprise hits like last year's Reese Witherspoon laugher *Legally Blonde* helped offset duds like the $50 million comedy *What's the Worst That Could Happen?*, which grossed only $32 million in domestic box office.

This fall the lion is roaring again. Its urban comedy, the $13 million *Barbershop*, has been a surprise hit, taking in $75 million so far in domestic box office. And James Bond has returned with *Die Another Day*, the 20th installment in the multibillion-dollar Bond franchise.

MGM is still the last of the stand-alone studios, as Yemenidjian has had no success landing a major strategic partner to secure new distribution for the more than 4,000 films in the company's library. Despite Yemenidjian's insistence that his goal is to build the company, MGM is often rumored to be for sale. Doesn't matter, because Hollywood moguls say financier Kirk Kerkorian, who owns 77%, thinks MGM is worth far more than its current price of $14 per share. —*Brett Pulley*

MARCH 5, 2001

## Rise and Fall

A mathematician-turned-lawyer, Henry Yuen parlayed an easy way to record TV programs into a $1.9 billion fortune and a mini media conglomerate with a $40 billion market cap—Gemstar-TV Guide. For three years Yuen made our Forbes 400 list.

Now comes Yuen's downfall. After competitors started to impose on Gemstar's would-be monopoly in television navigation software, its stock price tumbled. In October Gemstar's biggest shareholder, Rupert Murdoch's News Corp., pressured Yuen to relinquish his chief executive post to a former News Corp. executive. In November Gemstar avoided delisting from Nasdaq after agreeing to file a pile of paperwork with the SEC, including earnings restatements for the past three years. Battered, Gemstar's stock languished at a recent $4.

Two comforts for Yuen: He's getting $30 million to give up control and a $2 million annual salary to drum up international business. —*Jonathan Fahey*

JULY 9, 2001

## Picture Perfect

At a time when Silicon Valley is still burying the corpses of failed technology start-ups, Santa Cruz, Calif.'s tiny LightSurf is hiring engineers. Run by Philippe Kahn, who founded and famously crashed spreadsheet-maker Borland International, LightSurf makes software that lets cell phone users snap and send pictures with their handsets. This year LightSurf teamed up with Sprint to offer PC Vision, which was introduced in September. Fourteen million Sprint customers in the U.S., 17 million in Europe and 20 million in Japan now use the technology.

LightSurf has also expanded its deal with Kodak Picture Centers to upload to the Internet photos dropped off at the centers. It now serves 50,000 Kodak sites in the U.S. and Canada, up from 7,700 when our story ran. LightSurf's revenues have doubled to $12 million. Plans for an IPO? No comment from Kahn.

—*Tomas Kellner*

NOV. 25, 2002

## We Hardly Knew Him

Did the challenge of healing R.R. Donnelley's self-inflicted wounds scare off a promising new head of printing, Rona Daly? Just five days after our story about Daly's central role in Donnelley's turnaround went to press, he said he was quitting to become the chief executive of the $1.2 billion (sales) U.S. arm of Netherlands-based Oce N.V. "I'm not running away from anything," says Daly, who insists he has no beef with the 138-year-old printing company's plans. Oce sells digital printers and software to the printing industry. —*Stephane Fi*

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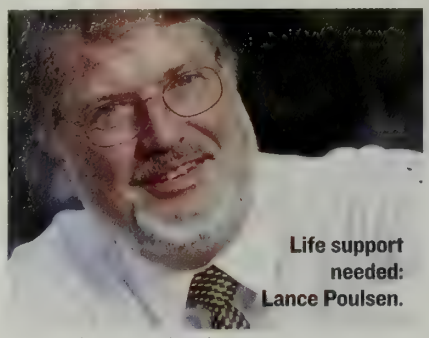
OCTOBER 28, 2002

## Heal Thyself

The fallout has been swift since our story on National Century Financial Enterprises, the health care financing outfit whose collapse has sent shudders through the asset-backed-securities market.

Following the story, both Moody's and Fitch slashed their ratings on NCFE's outstanding bonds. Chairman and cofounder Lance Poulsen resigned, and lawyers are lining up to get in their licks. At least two of the company's strapped clients have filed for bankruptcy. Another company, Med Diversified, launched a $1 billion lawsuit accusing Poulsen, along with bond trustees J.P. Morgan Chase & Co. and Bank One, of "misuse of funds," among other mischief. Following an FBI raid in November, NCFE filed for Chapter 11.

NCFE's meltdown is not the first to hit the risky business of financing medical receivables. Tower Financial tumbled into bankruptcy in 1993 amid accusations of fraud, and its successor company, Qualis Care, also went bankrupt.



Life support needed: Lance Poulsen.

NCFE and firms like it agree to take on the receivables of health care providers in exchange for upfront payments on outstanding medical claims. NCFE then bundles and securitizes the receivables on Wall Street, most often through Credit Suisse First Boston. But unlike credit card payments, auto loans and other consumer receivables, medical payments are significantly more difficult to collect. Blame glacial insurance firms and the complexity of Medicare and Medicaid.

Before he quit, Poulsen bragged to FORBES last June: "No NCFE-rated program has ever suffered a default, so no investor has ever lost a single dollar in a NCFE program." Managers of the bon funds stuck with NCFE's paper may soo find out otherwise. —*Seth Lubo*

JULY 9, 2001

## Woe Is Wittig

Things keep getting worse for David Wi tig, embattled chief of Westar, a diversifie utility company in Topeka, Kans. Wittig high lifestyle, brusque manner and rapi fire dealmaking were damaging both h own reputation and his debt-ridden con pany. Now a federal grand jury in Topel has indicted Wittig on fraud and mon laundering charges. Wittig, former cohe of mergers at Salomon, allegedly help the boss of a local bank buy a person stake in an Arizona real estate venture wi $1.5 million of bank funds. Already und investigation by the feds for personal u of company planes, Wittig says he is inn cent of all charges. Westar shares fetch $44 at their peak four years ago. They r cently traded at $9. —*Bernard Cond*

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65 YEARS AGO IN FORBES/DECEMBER 1, 1937

## Wanted: Ideal Executive

In very large corporations the ideal executive line-up includes four different types. First, a chairman who is a business statesman, broad-gauged, intelligently interested in national affairs, as well as being capable of shaping policies and finances. Second, a dynamic president, expert in production problems and, preferably, able to sally forth to the firing line when big contracts are being let. Third, a master sales manager, bubbling over with ideas, originality, enthusiasm, pep, capable of inspiring the whole salesforce—and of commanding their respect for his practical abilities. Fourth—and this is what many corporations lack—a vice-president in tune with labor, preferably a man who has come up from the ranks, a man of deep human sympathies, temperamentally fitted to meet and mingle with wage earners, to talk their language, to inspire their confidence.

40 YEARS AGO IN FORBES/JUNE 15, 1962

## Hiding Wall Street's Underwear

SEC Chairman William L. Cary had promised that the first full-scale investigation of the securities industry since it was brought under federal scrutiny three decades ago would not degenerate into a "flamboyant anti-Wall Street publicity venture." Clearly, it had not. Yet in the wake of its worst rout in 33 years, Wall Street was looking for a scapegoat. No one could deny that Cary's 65-man staff of investigators bent over backwards in last month's public hearings to avoid scandal-mongering. Wherever possible, the questioners let the testimony speak for itself (e.g., the admission by one mutual fund sales organization that its training program for new salesmen consisted mainly of "sitting around the office for four or five days listening to other salesmen sell"). Said Milton H. Cohen, the lawyer presiding over the task force: "We didn't want to show anybody's underwear."

25 YEARS AGO IN FORBES/APRIL 1, 1977

## Leader of the Pack

Beyond question, Cadillac is the mark of dominance in the luxury field. In the last 30 years it has outsold its nearest competitor, Ford Motor Co.'s Lincoln Continental, by close to three and a half to one. Since 1946, GM has sold about 5 million Cadillacs to Ford's 1.5 million Lincolns. Dominance on that scale has brought predictable problems of production and quality and control. A less immediate, but ultimately graver problem is still down the road a piece, but getting closer all the time. By 1985, under present federal law, all new cars on U.S. highways, including luxury cars, will have to be part of a fleet that averages 27.5 miles to a gallon of gasoline (compared with 16.5 for a Seville today). Can Cadillac build a compact-size efficiency into a luxury without destroying its mystique?

*Cadillac is now in fourth place among luxury brands, outflanked by Mercedes, Lexus and BMW. The most popular Cadillac model, the DeVille, gets 24 miles per gallon.*

ne new 2003 Ford Taurus SEL. Surprised? Well, if you haven't looked at a Taurus lately, look again.

# Super Car, Super Feud

General Motors' Bob Lutz was leading a high-profile venture to bring back the Cunningham sports cars of the 1950s. Why did it blow up? BY JOANN MULLER

ROBERT A. LUTZ, COLORFUL, INfluential and wise about cars, is an icon in Detroit. That made him, thought Briggs Cunningham III, a wealthy Kentucky cattleman, the perfect partner for a business proposition he had a few years ago. Cunningham, 70, wanted to revive the fabled Cunningham brand of racecars that his father had conceived and made into a dominant player in racing in the 1950s.

"We felt a little bit in awe when we went in there," recalled Cunningham of the 1999 meeting at which he proposed the idea to Lutz. It was a good omen, he thought, when Lutz, now 70, showed up wearing a tie that was identical to his—with a hand-painted picture of a Cunningham on it. Lutz, a racing enthusiast, had a 1953 Cunningham C3 Vignale coupe in his collection of more than a dozen cars.

They celebrated their joint venture at the Detroit auto show in January 2001 with the unveiling of the stunning Cunningham C-7 concept car. Their plan: to create a "v tual car company" that would farm o most of the design, engineering and ma ufacturing work for the powerful V-12 outside suppliers. They planned to sell more than 600 Cunninghams a year, about $250,000 apiece. A FORBES co story in April 2001 about virtual comp nies featured the vehicle.

Now the project is dead, and Cu ningham isn't so awed anymore. He suing Lutz, accusing his former partner

rchestrating a plan to wrest control of the ompany away from him—with help from General Motors and others. "He had all he knowledge, and we had the name," ays Cunningham, a Yale graduate and forner prep school teacher and administrator. "We invested in Bob, and that's who ve depended on."

Lutz, now vice chairman of GM, won't omment, but GM officials and others inolved in the project say Cunningham has it ackwards. "Clearly, this is a case of the hite knight being slayed by an individual e was trying to help," says GM spokesman ay Cooney. "Bob Lutz did everything in his ower to try to help Briggs Cunningham, nd then he sues him."

The partnership was struck with a andshake at that first meeting, recalls Cunningham. The two men agreed to inest $1 million apiece, and they each obained a line of credit from Credit Suisse First Boston Corp., at whose parent, Credit Suisse, Lutz's father had been an officer.

beaut that ied: Briggs unningham nd Lutz at uto show.

Lutz made his presnce felt immediately, says Cunningham. Ie vetoed the design concept that Cuningham and general manager Larry Black riginally presented, insisting that they nd a new designer. Lutz also rejected Cunningham's and Black's choice of a fabcator to build the concept car.

For the auto show the company had me to build only a fiberglass shell of the ar—yet it was an enormous hit. Chief excutives and designers of the world's largest uto companies surrounded the vehicle, dmiring its muscular lines. Among them as GM Chief G. Richard Wagoner. Eight onths later Wagoner hired Lutz, who was en head of Exide Corp., as vice chairman revive GM's tired lineup of vehicles. GM vested $2 million in Cunningham Motor late 2001 and early 2002, at $5 a share.

The investment should have been welome news for Cunningham. But in late 001, he says, he was shocked to learn om Walter J. Borda, Cunningham Iotor's attorney, that the original $1 milon loan he'd received from CSFB would ot be rolled over for another year as he ad expected it to be. In his lawsuit Cuningham claims that Borda—who had helped arrange the loan—had been advised of the bank's plans in late 2000 but hadn't told Cunningham then. Borda responds that Cunningham should have been aware of the loan's maturity date, and had had opportunity through his dealings with the bank to clear up any confusion.

In a bind, Cunningham tried to sell a portion of his stock for $5 a share. But Lutz and other stockholders refused to buy him out at $5 a share, and GM wouldn't buy him out, either. GM's intention, says spokesman Cooney, was to provide capital to help the company grow, not to bail out an existing shareholder. Cunningham was told that if he sold his stock to an outsider GM would back out of the deal—which would probably end the venture.

So, in late 2001 Cunningham sold his 775,000 shares back to the company at $1 a share, only to have GM turn around and invest at $5 a share. He also received $225,000 in license fees for the use of the Cunningham name, allowing him to pay off CSFB—but leaving him with no stake in Cunningham Motor.

This could just be a case of an out-of-his-league entrepreneur losing his funding. But Cunningham sees a deliberate plan. Why would Lutz or GM want him out? Maybe because he and his associates were just being a pain in the neck, as Borda complains in a February e-mail to Cunningham's son. Cunningham's attorney, Mark Hayden, claims it was more ruthless: The company's profit projections were so strong, he says, they wanted the company to themselves. Says Hayden: "These men took advantage of Briggs Cunningham and put him in a position to sell his stock for 20% of its market value."

This fall Lutz and GM had planned to start raising $75 million for Cunningham Motor. But if Cunningham wanted to see his father's car revived, his suit, seeking $24 million in damages, has almost guaranteed that won't happen. It has probably killed any chance of raising capital, and thus, the company, too, says Cunningham Motor Chief Executive John McCormack.

Mr. C., as Briggs' famous father is known, is now 95 and lives in Las Vegas, but he knows nothing about the fight over his name. He's probably better off. F

## Bowl-o-Drama

**Michael Moore's Oscar-contender** documentary, *Bowling for Columbine*, pokes fun at corporate creeps and hypocrites in his crusade to figure out who is to blame for the gun-related violence in America. But we've found Moore's facts a little slippery.

**TITLE:** Moore titled the movie *Bowling for Columbine* because, he suggests, the two kids who shot up Columbine High in Littleton, Colo., went to a 6 a.m. bowling class on the day of the attack.
**ACTUALLY:** Cool story, but police say it's not true. They say the shooters skipped their bowling class that day.

**MISSILES:** Moore wonders whether kids at Columbine might be driven to violence because of the "weapons of mass destruction" made in Lockheed Martin's assembly plant in Littleton. Moore shows giant rockets being assembled.
**ACTUALLY:** Lockheed Martin's plant in Littleton doesn't make weapons. It makes space launch vehicles for TV satellites.

**WELFARE:** Moore places blame for a shooting by a child in Michigan on the work-to-welfare program that prevented the boy's mother from spending time with him.
**ACTUALLY:** Moore doesn't mention that mom had sent the boy to live in a house where her brother and a friend kept drugs and guns.

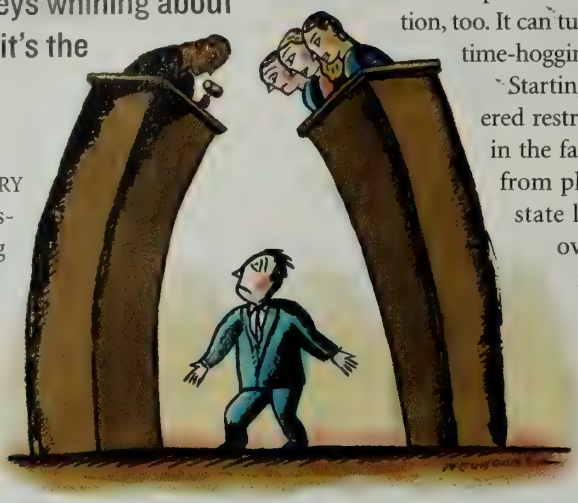
**BANK:** Moore says North Country Bank & Trust in Traverse City, Mich., offered a deal where, "if you opened an account, the bank would give you a gun." He walks into a branch and walks out with a gun.
**ACTUALLY:** Moore didn't just walk in off the street and get a gun. The transaction was staged for cameras. You have to buy a long-term CD, then go to a gun shop to pick up the weapon after a background check.

—*Daniel Lyons*

# Here Come Da Judge

## Usually it's plaintiffs' attorneys whining about mandatory arbitration. Now it's the corporate lawyers.

**BY JOANNE GORDON**



COMPANIES LOVE MANDATORY arbitration of employee disputes, right? No embarrassing and costly trials, no runaway jury awards, no class actions. Just a privately issued, rationally sized award from an arbitrator.

If only that were the case. Ask Waddell & Reed Financial, an Overland Park, Kans. mutual fund company. An arbitration panel socked the firm with a $25 million punitive damage award in 2001 after a fired employee claimed it had ruined his reputation by spreading rumors to his customers. And it was ordered to pay the ex-employee, Stephen Sawtelle, $1 million in compensatory damages and $747,000 for legal fees. The case dragged on for two and a half years through 100 hearings. And Waddell still landed in the court system when it appealed the punitive award in New York in November.

"Arbitration is billed as efficient and cost effective, but arbitrators give the lawyers free rein, and it goes on forever and ends up costing a lot of money," says New York lawyer Seth Schwartz, who is handling Waddell & Reed's appeal.

About 2,000 companies—including Anheuser-Busch, Halliburton and Credit Suisse First Boston—require employees to waive their right to sue and instead use arbitration to resolve allegations of wrongful firing, harassment or discrimination. Plaintiff lawyers have always disliked the waiver, since it crimps their style.

But now companies are starting to complain about arbitration, too. It can turn into full-blown litigation—costly, time-hogging and irrational.

Starting in the mid-1990s arbitrators lowered restrictions on punitive-damage awards in the face of court rulings and complaints from plaintiff attorneys. And federal and state law make it next to impossible to overturn an arbitrator's ruling, no matter how wacky or outsize it may be. "The arbitrators I've seen—frankly, they tend to be a little scary," says Philip Davidoff of law firm Winston & Strawn.

Another problem is that arbitrators, typically lawyers or retired judges, rarely dismiss frivolous employment cases at the start, a common occurrence in the court system. "They're more likely to split the difference even if the case has no merit," says Gary Friedman, who defends companies at law firm Mayer, Brown, Rowe & Maw.

Meanwhile, the legal cost of arbitration is skyrocketing. Arbitrators are allowing more depositions of witnesses, which consume long hours and can cause multiple hearings.

So are companies ready to abandon mandatory arbitration? Not yet. Indeed, corporate attorneys cheered last year when the U.S. Supreme Court ruled that mandatory arbitration policies are enforceable for most employees. Last year 2,159 employment cases were filed with the American Arbitration Association, up 60% from 1997. Employers figure that, flaws and all, arbitration still beats the court system. There's less publicity associated with it—usually. F

### ▶ By the Numbers

| | |
|---|---|
| 246 days | Average length of employee arbitration. |
| 41.5% | Percentage of claims filed by lower-income workers. |
| 58% | Percentage of requested damages awarded. |
| $84,754 | Average amount of that award. |
| 70% | How often employers were ordered to pay for employees' arbitration fees. |

Based on 200 American Arbitration Association awards in 1999 and 2000.
*Source: Elizabeth Hill, NYU School of Law, Center for Labor & Employment Law.*

## New From Mickey D's: Condoms

**Times are tough for McDonald's, what with price competition from Burger King and shares that have plummeted 43% since May.** Hard to blame it for looking beyond burgers for business, yet one of its new concepts is a head-scratcher: Tiktok Easy Shop, an automated convenience store.

Sort of a vending machine on steroids, the refrigerated Tiktok is 18 feet wide and dispenses 200 items, from bread and milk to laundry detergent and condoms. McDonald's won't say what the first one, on trial in Washington, D.C., is seeing in sales but in Europe experts say such machines can generate $200,000 a year.

Developed by Automated Distribution Technologies of Exton, Pa., Tiktok might gain a foothold on college campuses or near motels that don't offer room service, according to experts. One thing you won't find on it: a McDonald's name or logo.

—*Matthew Swi*

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Suited up and looking for a field: Schwalb in New York.

# Brushback Pitch

## Philip Schwalb is trying to launch an athletic hall of fame in New York City. But not everyone is being a good sport. BY LEIGH GALLAGHER

PHILIP SCHWALB, A 40-YEAR-OLD entrepreneur and die-hard basketball fan, wants to build a $51 million for-profit museum in New York City that would be dedicated to American sports.

Schwalb, supported by three city agencies, thinks that the halls of fame for baseball, football and basketball are too geographically remote to serve their fans, many of whom don't own cars. A sports museum in Manhattan, he says, could solve that, draw international visitors and play a role in rebuilding New York City.

What red-blooded American would oppose such an idea? To start with, the folks at the Baseball Hall of Fame, 230 miles away in Cooperstown, N.Y. Schwalb says he had a promising early conversation with the baseball museum's president, but the idea was benched when it reached the chairman, Jane F. Clark. She is the granddaughter of Stephen C. Clark, the philanthropist and sewing machine heir who established the baseball museum in 1939. Now the Cooperstowners won't even negotiate over Schwalb's venture. "Our involvement is that we don't have any," snaps a spokesman. "We are not involved in it, and we will not be involved in it."

Most baseball artifacts are in the hands of private collectors who might be persuaded to lend a few choice items. But the strikeout reverberated: The Pro Football Hall of Fame in Canton, Ohio was in talks with Schwalb, but punted after what happened in Cooperstown. Without the two halls' support he needed a new playbook. He decided to make the museum a shrine to all sports and now is working with the basketball, swimming, boxing, tennis and the NCAA halls of fame (in exchange for a slice of revenue).

"The concept now is better portrayed as the Smithsonian or the Met for sports," says Schwalb, who most recently worked for Edwin Schlossberg, the museum designer and husband of Caroline Kennedy.

Now all he needs is the $51 million. Most of the dough is supposed to come from revenue bonds that will get a federal tax exemption (but no backing) from the city; $10 million would come from money raised from investment banks, real estate investors and sports figures. Schwalb says he has raised $3 million so far, mostly from athletes and investors.

Schwalb's pitch says that a mere 1 million visitors per year (about the number buying tickets to Madame Tussaud's wax museum in New York City) would enable this operation to cover its debt service and even provide a handsome return to stockholders. At the moment that's like saying that a mere 120 wins next year would put the Cubs in the World Series. F

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## You can take courses at Tsinghua University—or buy one of the air conditioners it makes.

BY RUSSELL FLANNERY

**On a highway from Shanghai's main domestic airport** into the heart of the city, a slew of billboards beckons China's increasingly affluent consumers. Among them is one from Tsinghua University in Beijing. But rather than urging folks to sign up for continuing education, the university is advertising its latest line of air conditioners.

You expect a university to be a hotbed of innovation and entrepreneurship—isn't that what Stanford and MIT are all about? But the institution of learning that runs a business empire on the side seems to be peculiar to Chinese capitalism.

The university doesn't just instruct students. The school's business arms operate and invest in dozens of companies. Estimated sales last year exceeded $1 billion. At least three majority-owned Tsinghua companies are listed in China: Tsinghua Tongfang Co., China's fifth-biggest personal computer maker; Tsinghua Unisplendor, a software company; and Chengzhi Shareholding Co., a detergent producer. Beijing University, a nearby rival, has one up on Tsinghua in one regard—three of its affiliated companies are listed in Hong Kong, one notch higher in capitalism's pecking order.

It's all part of the messy evolution of China's economic system. A quarter of a century ago almost everything in China was held by some level of government or form of collective. With the waning of communism, many state bodies formed companies to compete in the brave new economy. Yet China's largest companies today, whether listed at home or overseas, are mostly still majority state-owned. Executives often tout their experience in the Communist Party. The chairman of Chengzhi used to be the head of the Communist Youth League at Tsinghua.

The university companies were envisioned as a means to create jobs for students and staff, says Luo Jianbei, who manages the school's incubator for startups. Few saw private enterprises playing such a big role in the economy. "It was," she says, "another era."

# A Foul-Smelling Business

## Malcolm Glazer's Zapata Corp. relies on an oily, bony fish for growth. What's he really fishing for?

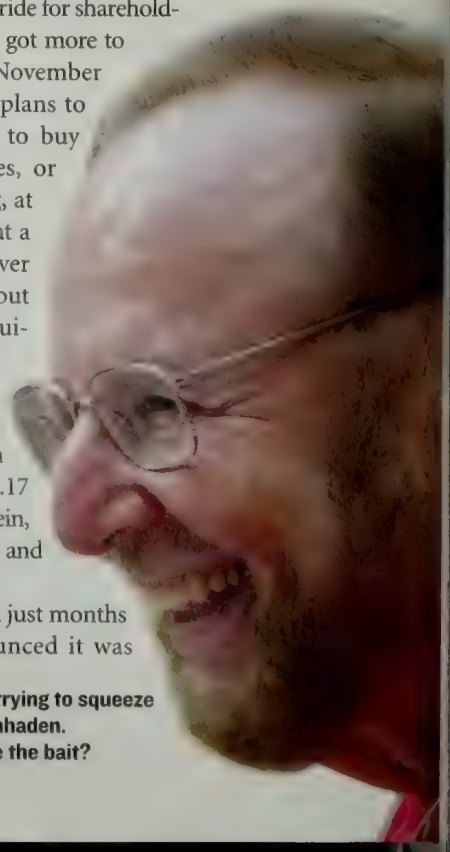
BY DAVID ARMSTRONG

AS FISH GO, MENHADEN AREN'T MUCH TO LOOK AT. Short, fat, oily and full of bones, they are inedible, foul-smelling, and often covered in parasites. But grind up 628,000 tons of the creatures, as Houston-based Omega Protein did last year, and you can sell the fish meal and oil to livestock farmers and food companies for $98.7 million, and eke out a $4 million profit.

This low-margin affair is the sole remaining business of Zapata Corp., the onetime oil and gas company cofounded by George H.W. Bush, and now 47% owned by the family of Forbes 400 member Malcolm Glazer (net worth: $750 million). After disastrous forays into restaurants, the Internet (remember the $1.3 billion bid for Excite.com?) and junk bonds, Zapata's 61% stake in Omega Protein accounted for virtually all of the revenue and net income Zapata booked last year.

It's been a rough ride for shareholders, and now they've got more to worry about. In November Zapata announced plans to spend $14 million to buy back 500,000 shares, or 21% of outstanding, at $28 each. That was at a nice $5 premium over the previous price, but roughly half the liquidating value of the company, which has a $60 million equity stake (14.5 million shares at a recent $4.17 each) in Omega Protein, $87.5 million in cash and no debt.

The offer arrived just months after Zapata announced it was



**The angler: Glazer is trying to squeeze some value out of menhaden. Will shareholders take the bait?**

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looking at "strategic alternatives" for its fish meal business. The buyback offer, coming without any disclosure by insiders of their intentions for their only business, is "a cynical maneuver designed to catch people napping," says Thomas McKay of investment firm Simplon Partners. He believes the Glazers will wait for the dust to settle before taking Omega Protein private at a lowball price. Getting access to Omega Protein's $29 million in cash and $30 million annual operating income (earnings before interest, taxes, depreciation and amortization) should boost the value of Zapata's shares far above the $28 offer—a boon for Zapata's largest stakeholder.

**Malcolm Glazer's offer to buy back shares in Zapata for $28 is "a cynical maneuver designed to catch people napping."**

The Glazers wouldn't return calls, but they could argue that Omega isn't even worth book value. Soybeans are now giving fish meal a run for its money in the protein business. Whatever happens to the menhaden, Zapata has been kind to the Glazers. Half of the $4 million the company spends in overhead expenses goes to salaries for members of the Glazer family. Malcolm Glazer, who is owner of football's Tampa Bay Buccaneers, has paid himself $1.5 million a year in salary and bonuses for the past three years—which will continue for the next four years even though he retired as chairman in March. Something fishy here? F

# The Kangaroo Leaps

## How a little family-owned winery in Australia made Yellow Tail the most successful American wine launch ever.

**BY BRENDAN COFFEY**

THE JOKE IN AUSTRALIA IS THAT JOHN Soutter should be fired for getting his sales projections so wrong. Soutter, general manager of a family-owned New South Wales winery called Casella Wines, figured his new wine, called Yellow Tail, would sell 25,000 cases in the U.S. during the last half of 2001. It sold 9 times as much.

The U.S. wine business hasn't seen anything like this since the beaujolais nouveau hype that established French giant Georges Duboeuf in 1981. Casella expects to sell 2 million cases of Yellow Tail in the U.S. in 2002, 600,000 more than Aussie competitor Lindemans sold last year. The biggest seller in its category is Robert Mondavi's Woodbridge, with an estimated 5.5 million cases.

By most reckonings Yellow Tail should have been doomed. It had no massive marketing budget or brand portfolio to leverage. Its improbable success comes from plugging a gap its big Aussie rivals had left largely unattended: the subluxury category. With Americans drinking less jug wine (under $5), there has been a scramble to sell at $7 and above. So Soutter came in with fruity chardonnay and shiraz blends that retail at $6 to $7.

Getting this *petit cru* onto American shelves was Soutter's next triumph. He cut a deal with the big importer, W.J. Deutsch & Sons, that gave Deutsch an incentive to move the bottles: Deutsch got a 50% equity stake in Yellow Tail brands in the U.S. Deutsch in turn leveraged its rights to the popular Georges Duboeuf line to convince distributors to push Yellow Tail.

Sales took off, largely by word of mouth but aided by the bottle's easily understood, bold label design. Soutter had bought the name and distinctive kangaroo label off the shelf from an Adelaide designer. "It appeals to young professionals especially," says Jon A. Fredrikson of Gomberg-Fredrikson, a wine market consultancy. Yellow Tail also benefited by tapping into the sudden appeal of Australian wine, best captured in a recent *Consumer Reports* tasting that made a Rosemount shiraz look like a terrific bargain.

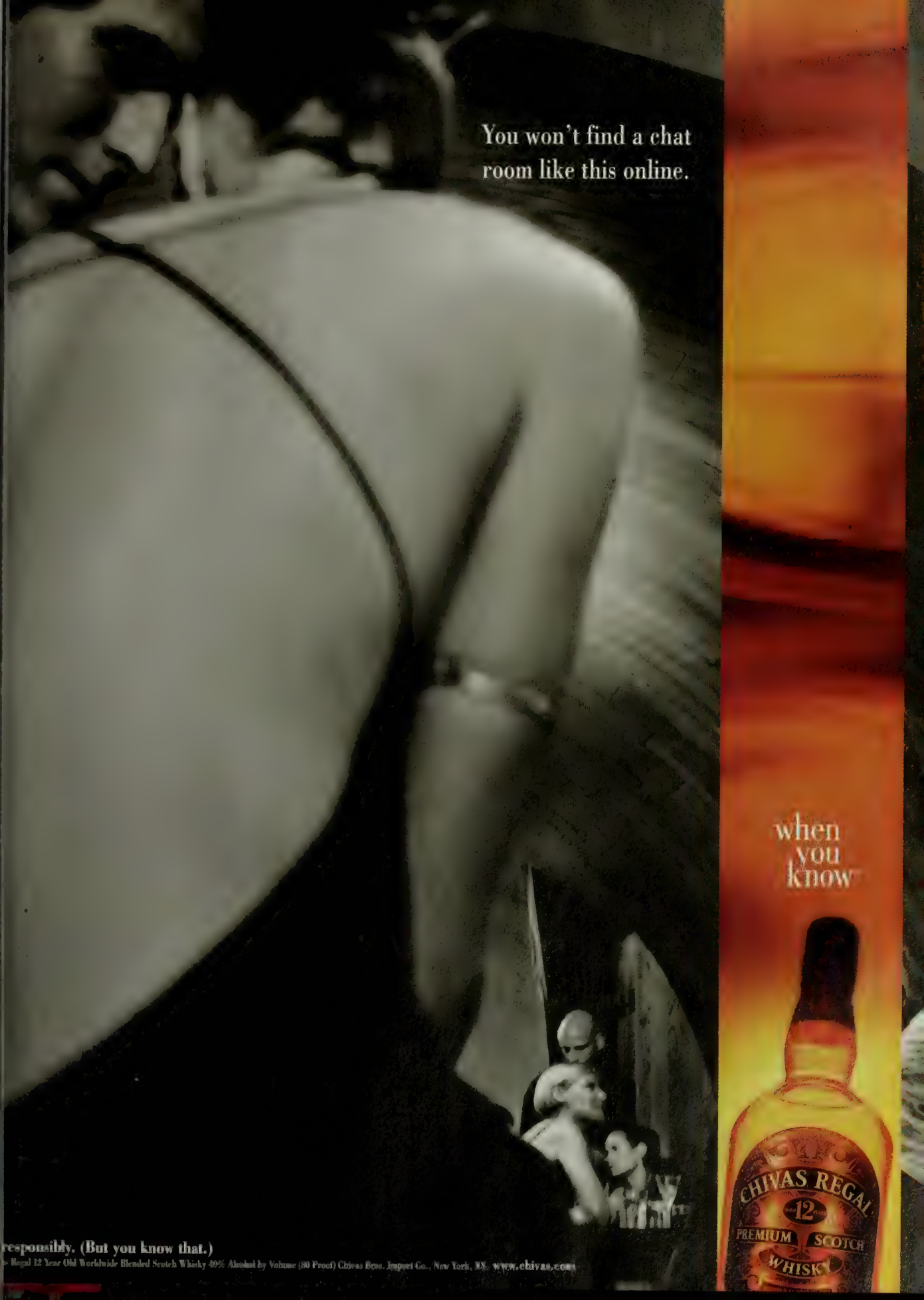
The runaway vintage is quite a feat for the Casella winery, founded by two Italian immigrants in 1969, which only recently was selling wine to the company that's now its main competitor, Southcorp, the Sydney-based giant.

Soutter plans next on bringing out pricier blends, costing up to $15, even though many low-end brands have flopped going up market. And he's looking afield, including exporting to Italy. If he can do that, he can sell ice to Eskimos. F

**By the Numbers**

| 4 million cases | $551 million | $2 billion | $600 million | $20 billion |
|---|---|---|---|---|
| Yellow Tail projected 2003 sales. | Annual Australian wine imports into U.S. | Value of wine imports into U.S. in 2001. | Sales of Kendall-Jackson, bestseller in U.S. | Total wine sales in U.S. in 2001. |

*Sources: Casella Wines, U.S. Department of Agriculture, Impact's 2002 Annual Wine Study, Wine Institute.*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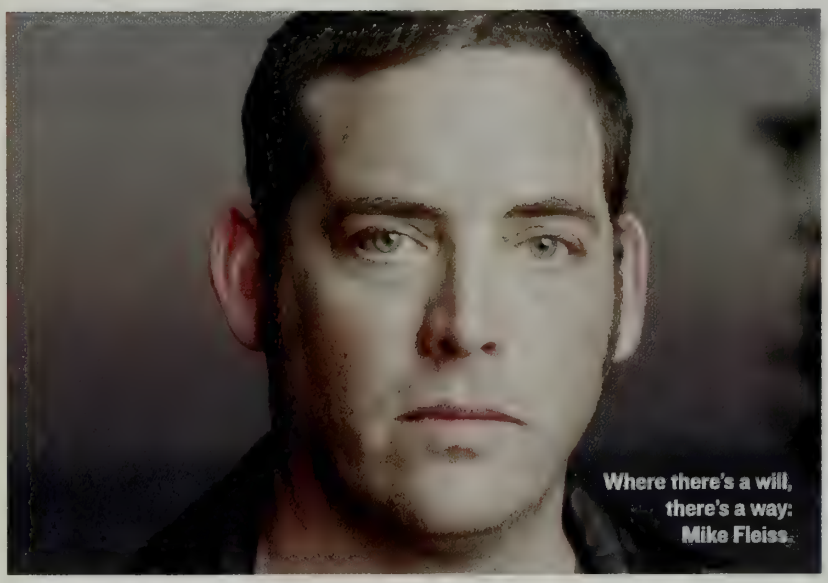


Where there's a will, there's a way: Mike Fleiss.

## Sounds Like Normal TV

Estate lawyers are fuming over e-mail pitches on behalf of Mike Fleiss, the producer behind the hit TV show *The Bachelor*, who is working up for ABC another reality show entitled *The Will*. A wealthy benefactor would let potential heirs vie for his inheritance and even vote one another out, as in *Survivor*. Fleiss is offering a $10,000 reward to find benefactors. "A travesty," fumes one attorney who received an e-query. The fine-print disclaimer on Fleiss' Web site warns that what's used might be "embarrassing, unfavorable, humiliating, derogatory" and "portray the participants in a false light." —*Janet Novack and William P. Barrett*

## Would Perry Mason Do This?

Clients of big law firm Jenkens & Gilchrist are suing in an effort to bar accountants Ernst & Young from giving the feds names of 40 joint clients involved in a tax-shelter scheme the two firms facilitated. Attorney-client privilege is being claimed, but E&Y says customers' names aren't privileged, and some already have turned themselves in—possibly under a partial amnesty program. Jenkens partner Paul Daugerdas earlier settled a lawsuit on undisclosed terms claiming he peddled a tax-shelter idea borrowed from another promoter. —*J.N.*

## Yahoo to Union: Do It Again

The Service Employees International Union, trying to organize workers at Santa Clara, Calif.-based Team Services, a janitorial cleaning firm used by Yahoo, thought it had found an eye-catching way to generate attention and pressure. The union sent out 2,000 copies of a "supplemental 10-Q investor report" detailing its complaints of bad pay and working conditions to Yahoo shareholders and analysts. What happened? In the two weeks after the report went out, Yahoo's stock rose 17%. —*Dirk Smillie*

## Profiting From the Mess They Created

A provision in the new Sarbanes-Oxley corporate governance law requiring public companies to have directors with financial experience may end up being a boon for the now-tarnished accounting industry. KPMG, for one, has hooked up with headhunter Foster Partners seeking to place many of the accountancy's 300 retired partners on corporate boards, hoping business will come its way. Other firms are expected to follow. —*Katarzyna Moreno*

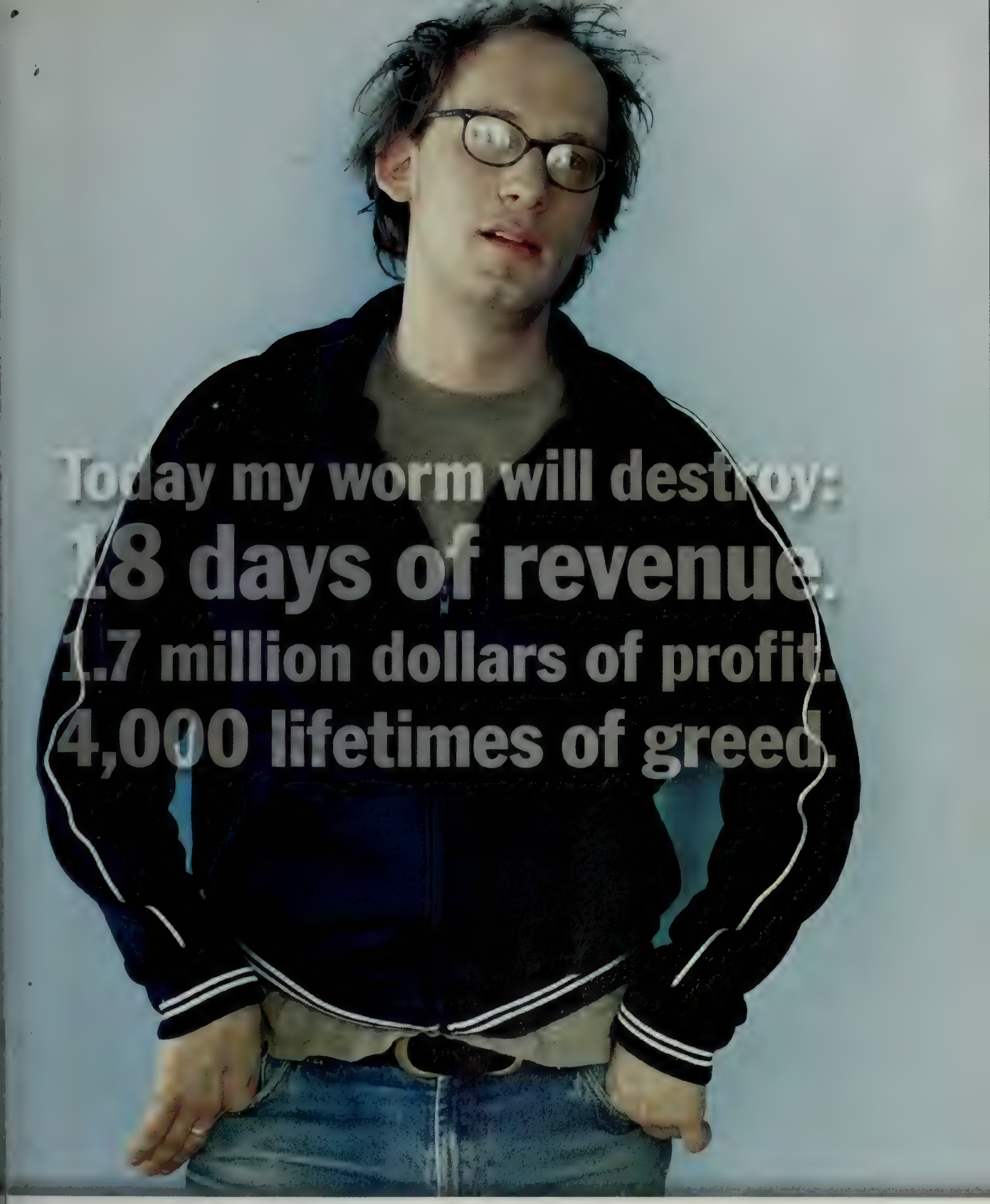
## Some Games May Have No Winners

Seeking a holiday gift for that discouraged investor in your life? Mr. Bigshot, a new stock-market board game that uses real data going back to 1965 on 1,000 companies, allows players to make picks all over again. Invented by Cincinnati-area jet engine designer Courtney Tudor, the game sells on Amazon.com for $25. Players start with $100,000, invest on the basis of detailed reports about unnamed firms, then make periodic hold or sell decisions. Winner: first player to amass $1 million. —*W.P.B.*

## Probably Not Mentioned in Chamber of Commerce Promotional Literature

Remote, scenic Spokane, Wash. has only 400,000 residents in its metropolitan area but, it seems, considerably more than its share of suspected fraudsters and financial finaglers. All these cases were pending at some point this year. —*W.P.B.*

| NAME | ALLEGATIONS INCLUDE | CURRENT STATUS |
|---|---|---|
| Frederick Weatherbee | involvement in dubious scheme selling pay phones | $5,000 administrative fine |
| Avista Corp. | aiding fraud at Enron Corp. | denies claim in civil lawsuits |
| Theoplis (Max) Daniels | defrauding Indian tribe in Idaho | pleaded not guilty |
| Terrence Dunne | signing audit knowing some information was false | pleaded not guilty |
| Four local car dealers | rolling back odometers on used cars from Canada | pleaded not guilty |
| Keith L. Jones | submitting false documents to get loans | awaiting sentencing |
| Daneka Keith | defrauding Mothers Against Drunk Driving chapter | suspended jail sentence |
| Heather L. Porter | stealing money from school's parent-teacher fund | criminal charge pending |

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# WITCH HUNT

## Eliot Spitzer vows to pursue every abuse on Wall Street. Will that include those in his own office?

BY MICHAEL FREEDMAN

AS ELECTION DAY DWINDLED TO A CLOSE, 400 FANS waited in a ballroom at the Waldorf-Astoria hotel in New York to celebrate Eliot Spitzer. He had just won his second term as New York State attorney general, with 66% of the vote. His supporters mused about what might come next for "the Enforcer," "the Crusader," "the Sheriff of Wall Street," as he has been dubbed in adulatory news stories. He could run for governor in 2006, of course. Or maybe even President.

Anything seems possible for this ambitious 43-year-old politician, who has catapulted himself into the national spotlight with his relentless attack on Wall Street, capitalizing on the public's thirst for revenge for all the money lost in the past three years in the stock market. Scary prospect: This state officer's intrusion into an area that had been the domain of the federal Securities & Exchange Commission could trigger a patchwork of new and contradictory local laws as still more state regulators jump on the let's-bash-Wall-Street bandwagon *(see chart, p. 76)*.

The Spitzer assault includes grandstanding press conferences and threatened enforcement cases against the biggest names in brokerage. That the effect of all this is more to damage market valuations of Wall Street firms and throw analysts out of work than to restore investor confidence seems not in the least to have detracted from Spitzer's popularity. "We will pursue every abuse on Wall Street with or without Harvey Pitt," he thundered to the victory party audience, eliciting wild cheers. "We will not stop!"

While he crusades to hold Wall Street to the highest standards, the evidence suggests Spitzer has toed the gray lines that separate truth from hypocrisy and divide the honest from the unethical. Some examples:

- He failed to disclose $9.1 million in loans that funded his 1994 and 1998 candidacies, in possible violation of state law. Spitzer points out a rival candidate sued regarding this, and the suit was dismissed. The loans came from J.P. Morgan Chase—one of the banks that Spitzer hasn't investigated. He also reaped riches in a hedge fund that may have profited from some of the practices he now decries.
- Spitzer mischaracterized and exaggerated evidence in his investigation of Merrill Lynch, ignoring information that undermined his case. He also discussed his investigations with the media and revealed future efforts to a hedge-fund manager who could have profited from the information. And he publicly threatened criminal action to force Merrill into a civil settlement—despite state ethics rules that forbid this kind of leverage.

## Merrill's Lynching

Eliot Spitzer's investigation of the New York investment bank has been a disaster for its stockholders. Now that the heat is on Citigroup, maybe the thundering herd can begin to rebuild.

*Source: FT Interactive Data via FactSet Research Systems.*

• He filed a civil suit against five telecom executives alleging they gave their underwriting business to Salomon Smith Barney in exchange for access to hot initial public offerings—even though no law expressly prohibits this.

Spitzer says he hasn't violated any ethical or legal prohibitions. His confidantes say he is one of the most moral people they know.

This rich man's son, who calls himself "the people's lawyer," is an unlikely champion of the individual investor. Spitzer likes to tell of how his father grew up on Manhattan's Lower East Side "without two nickels to rub together." He neglects to mention that his dad, Bernard, today owns at least $36 million in New York City real estate, has a charitable foundation with $25 million in assets and has given or lent millions of dollars to Eliot to smooth the way for his political career.

Eliot Spitzer grew up in the tony Riverdale section of the Bronx, where he attended the Horace Mann prep school. He went to Princeton and Harvard Law, and did stints as a federal judge's clerk and as an assistant district attorney in Manhattan. From the start Spitzer took a broad view of his authority, looking to reform industries rather than just put the bad guys in jail. In a 1992 case involving the Gambino crime family and the garment industry, Spitzer let the defendants plead to lesser charges and avoid jail time in exchange for getting out of the business entirely. Later that year he accepted a plush job at Skadden, Arps, Slate, Meagher & Flom defending Wall Street types accused of money laundering and securities fraud. In 1994 he ran for state attorney general, visiting each of New York's 62 counties as a candidate in a four-way Democratic primary.

To pay for the campaign, Spitzer took out a $4.3 million loan from J.P. Morgan, secured by personal property, including apartments in Manhattan. His salary at the time: $271,000—far less than he would need to repay the debt. He came in dead last and returned to private practice. He ran again in 1998, borrowing $4.8 million more from J.P. Morgan, against his Manhattan property and other assets. It was a bitter race, with Spitzer slamming incumbent Republican Dennis Vacco for taking campaign money from companies that did business with his office. Vacco countered that Spitzer had failed to disclose his own loans, as required by the Martin Act—the very law Spitzer now uses to go after Wall Street.

Opponents also claimed his father must be paying off the two loans, a potential violation of campaign finance laws that limit the amount candidates may receive from family members to $260,000. At first Spitzer told reporters the money had come from his personal savings. But with just days to go until the election, he admitted to the *New York Times* that his father had lent him money to repay the first Morgan loan. It is still unclear what happened to the remaining debt—or why Spitzer failed to disclose

**While Spitzer railed against conflicts of interest, he may have had some of his own.**

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the loans. He insists he did not have to, noting that he voluntarily told his New York co-op board in 1998. State filings show only that Spitzer continues to owe more than $5,000 to J.P. Morgan.

To dig up still more money for his 1998 campaign, he turned to an old law school chum, hedge-fund manager James J. Cramer. In the 1990s Spitzer had invested an undisclosed sum in Cramer's fund, and Cramer says he made Spitzer a "boatload" of money. Cramer would pick up bits of news, load up on the right stocks, leak the gossip to Wall Street analysts and bail out after the price popped. Cramer also knew that investment banks rewarded their best clients by letting them in on hot IPOs. In a recent tell-all book, former Cramer employee Nicholas W. Maier writes of getting in on popular stock offerings by promising to buy more at a higher price later, to keep the stock up. Then the hedge fund promptly dumped all the shares for a quick gain. Cramer denies this. Spitzer says he was unaware of any controversy regarding the fund.

The fund returned 20% to 30% annually in the years Spitzer invested. He redeemed at least $730,000 in 1998 and then eked out a victory over Vacco. The bull market roared for two more years, and Spitzer worked on standard fare—telemarketing fraud, the state lemon law. But when the market crashed in mid-2000, investors wanted answers—and scapegoats. The SEC began investigating Credit Suisse First Boston and other banks in connection with their IPO handouts. Class actions were filed. And Spitzer, whose predecessors had focused on penny-stock fraud and such, began eyeing big targets on Wall Street.

He doubled the size of his securities enforcement division to 20 lawyers and, in April 2001, delivered the first set of subpoenas to Merrill Lynch and other investment banks. Spitzer's authority comes from the Martin Act, a sweeping 80-year-old state law that lets him press criminal or civil charges in securities cases. An offender doesn't have to have intentionally committed fraud—Spitzer must show only that a failure to disclose relevant information hurt consumers.

Thus armed, Spitzer's office combed through 30,000 pages of Merrill documents and e-mails, looking for trouble. In April 2002 Spitzer announced he had found damning evidence that Merrill analysts had committed fraud on small investors by denigrating stocks in private while promoting them in research reports. Their goal, he said, was to get investment banking business. "This was a shocking betrayal of trust by one of Wall Street's most trusted names," Spitzer proclaimed at the time.

Yet the documents paint a less clear picture. Spitzer ignored dozens of pages of evidence that suggests Merrill put a premium on honest, independent analysis: a 1997 policy manual that prohibits attempts by investment bankers to influence Merrill analysts' reports; a Merrill executive's November 2000 reminder that the "reputation of Merrill research for good fundamental and investment advice is key to nearly all the activities of this firm"; a 13-point bulletin sent to analysts in April 2001 telling them "your credibility is your currency."

Spitzer claimed a Merrill analyst called a stock "a powder keg." Yet the e-mails show the analyst was attempting to persuade a junior colleague to lower a rating. Spitzer described how one analyst told a Merrill banker any notion of independence was "a big lie"; in fact, the banker assured her she could rank a particular stock any way she pleased. She did, issuing a tepid "neutral."

A day after unveiling his finds, Spitzer appeared as a guest on *Kudlow & Cramer*, a CNBC talk show cohosted by his old money man, Jim Cramer, who on the show identified Spitzer as "one of our most courageous public servants." On the same day Spitzer told CNNfn that "Merrill Lynch is going to have to think long and hard about where it wants to go in this investigation." And on Apr. 25 he told *CBS Evening News* that if Merrill continues "to maintain that what happened was inappropriate but wasn't illegal, then there will be no settlement. Then there will be much tougher sanctions. There could be criminal charges. And the fate

## Wall Street's Shooting Gallery

Eliot Spitzer has inspired an abundance of copycats in various states. Here's a partial list by state, politician and target.

| ALABAMA | CALIFORNIA | CONNECTICUT | MASSACHUSETTS | NEW JERSEY | TEXAS | UTAH | WASHINGTON |
|---|---|---|---|---|---|---|---|
| Joseph Borg | Demetrios Boutris | Richard Blumenthal | William Galvin | David Samson | Denise Crawford | S. Anthony Taggart | Deborah Bortner |
| Dir., Securities Comm. | Corps. Commissioner | Attorney General | Secretary of the Commonwealth | Attorney General | Securities Comm. | Dir., Securities Div. | Dir. of Securities |
| **Lehman Brothers** | **Deutsche Bank** | **UBS** | **CSFB** | **Bear Stearns** | **J.P. Morgan Chase** | **Goldman Sachs** | **US Bancorp Piper Jaffray** |

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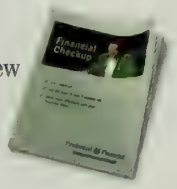


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# Closed-End Funds

By Michele Wucker

## Discover a Way to Diversify

With interest rates near record lows, some investors are looking to closed-end funds — managed asset portfolios that trade like stocks — to boost their returns. Though these investment alternatives are less visible than their more-familiar mutual fund cousins, closed-end funds can fill a buy-and-hold niche in a diversified portfolio.

Like mutual funds, closed-end funds invest in a set of securities — stocks or bonds, often grouped by industry, municipality, or country. Unlike mutual (or "open-end") funds, whose total number of shares changes as investors enter and exit the market, closed-end funds issue only a fixed number of shares. Those shares are listed on the New York Stock Exchange (NYSE), where they can trade at more or less than the value of the underlying securities held by the fund, defined as its net asset value (NAV). The resulting premium or discount to NAV brings extra opportunity — and possible risk — into the investment decision.

"The closed-end fund gives an individual investor a way to own a professionally managed and diversified portfolio that utilizes leverage in a way that would be very difficult for an individual investor to access alone," says Robert Kapito, Vice Chairman and Head of Portfolio Management at BlackRock, Inc.

### Choices, Choices

As of May 2001, only an estimated 3.3 million U.S. households — only 3.1% — owned closed-end funds, according to a study by the Investment Company Institute, the national industry association. Of these, 81% also owned mutual funds, emphasizing the role of the closed-end fund as part of a diversified portfolio.

Opportunities for investing in closed-end funds are growing. With net assets of over $120 billion, there are now 633 closed-end funds trading on North American exchanges, 400 of them with a combined market capitalization exceeding $100 billion trading on the NYSE. From the beginning of 2001 through the end of August 2002, some 78 new funds raised $16.6 billion, the lion's share investing in bonds.

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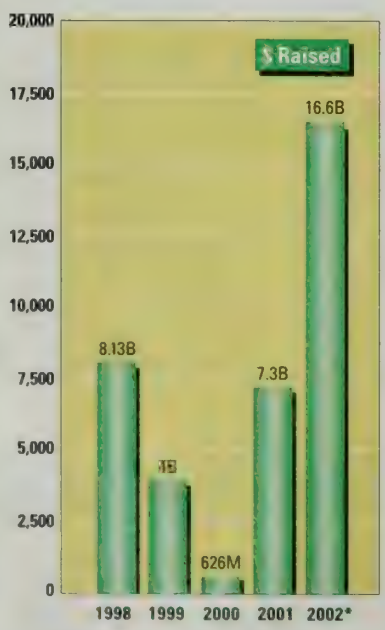
**Capital Raised by Closed-End Funds**

Nearly a decade after the last closed-end fund boom, low interest rates have brought closed-end bond funds into vogue.




Source: Lipper, Inc *through 8/31/02

Though tiny next to the $7 trillion mutu fund industry, closed-end funds actually p date "open" funds by more than 30 yea Boston Personal Property Trust, founded 1893, was the first closed-end fund in Am ica. In 1927, Lehman Brothers and Laza Freres created General American Investo which survived Black Monday two years la and became the oldest U.S. closed-end fu in operation.

Closed-end funds came under the arm of t Investment Company Act of 1940, whi requires them to register with the Securit and Exchange Commission and follow its c closure and oversight rules.

The funds caught on in the early 1980s, es cially those that invested in equities. Invest snapped up shares in "Superstar" funds l the Gabelli Equity Trust [NYSE:GAB] a the Royce Value Trust [NYSE:RVT].

In the early 1990s, closed-end fu appeared for virtually every country with own stock market, bringing their numbe around 80. "The list of country funds is l roll call at the United Nations," says D Cassidy, senior research analyst at Lip which tracks fund performance.

As the U.S. stock market took off in mid-1990s, investors focused their buying equities. These days, investors are starved opportunities, which closed-end funds providing.

"Income-oriented closed-end exchar traded funds offer attractive and depend dividend income and can be convenie

ıght and sold like any stock," says Bill ıams, who oversees closed-end exchange-ded funds for Nuveen Investments. emand has grown significantly as investors k to rebalance their portfolios during this llenging investing environment."

Municipal bonds, accounting for more than f of closed-end bond funds, make up und $50 billion in assets. Arizona, Cali-nia, Connecticut, New Jersey, New York, io and Pennsylvania funds have all come market recently. With an average one-year -free total return of 5%, munis add attrac-yield to credit quality and tax advantages especially in high-tax states with double-free status for funds. Because they can row short-term tax-free funds at 1% to %, closed-end funds can outperform a ni bond alone.

n addition to municipal bonds, closed-end ds offer a wide choice of investment oppor-ities: high-yield corporate securities, real-ite investment trusts, foreign securities, ferred securities, asset-backed securities, ıstry sector investments and more.

## ıe Final Decision

ustry veterans recommend that investors sidering closed-end funds research the e kind of information that they would for kind of fund: long-term portfolio return, nager's experience, fees and expenses, and ıt role the fund is to play as part of the estor's overall asset allocation plans. Only ı is it time to examine the fund's discount remium to NAV.

'd put emphasis on a fund's investment ord and philosophy first, and on the dis-nt second," says Eugene DeStaebler, vice sident for administration at General erican Investors (NYSE: GAM). "Funds perform well tend to sell at smaller discounts or even at premiums, but higher prices generally don't last."

Analyzing NAV gives insight into how well the assets in a fund's portfolio have performed. The meaning of a premium or discount to NAV depends on its context. A particularly strong NAV performance can create a discount, for example, while a premium may reflect either falling assets or strong demand for the fund. A fund's share price thus can fluctuate more dramatically than the underlying portfolio, creating buying opportunities or signals to wait.

"Closed-end funds do require a little bit more analysis and understanding, but the reward is there," says Brian Smith, executive director of the Closed-End Fund Association, the national trade group representing the industry.

Investors can find out more about a fund's performance history by requesting research from their broker-dealer or investment manager, and checking NAV and price information published regularly in the financial pages of newspapers. They should ask why a fund trades above or below its NAV: if the answer is that the NAV has risen faster than the price, the fund may be a low-cost way to buy the underlying assets.

This kind of analysis can also help predict whether a premium or discount is likely to widen or narrow. Comparing the fund to similar funds can help the investor decide whether the fund is a good buy in its class.

The final decision to invest in a closed-end fund then is like any financial decision: determining whether the price represents good value.

Directories, background information, and answers to frequently asked questions are available from the New York Stock Exchange (www.nyse.com/cefs), the Closed-End Fund Association, (www.cefa.com) and Investment Company Institute (www.ici.org).

### osed-End Fund Advantages

- Because their capital is fixed, closed-end funds have more trading flexibility, including the ability to borrow funds.
- They do not have to manage the unpredictable inflows and outflows of capital that can force mutual fund managers to buy or sell securities at less-than-ideal times.
- This reality, combined with lower marketing costs, often keeps management fees lower than those of mutual funds.

AllianceCapital
BLACKROCK
citigroup asset management
COHEN & STEERS CAPITAL MANAGEMENT INC
Deutsche Asset Management
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of their company is in their hands."

Yet state ethics rules prohibit lawyers from using the threat of criminal liability to obtain advantage in a civil settlement. The regulations also ban lawyers from speaking out on matters that could prejudice a jury. While declining to comment specifically on Spitzer's cases, Stanley Sporkin, a former federal judge who headed enforcement at the SEC in the 1970s, says, "It's illegal and improper to say that you're going to be prosecuted unless you do a-b-c on the civil side."

Merrill publicly denied Spitzer's charges, but the embarrassing e-mails were hard to explain away in a sound bite. Its shares collapsed 20% in the six weeks after Spitzer announced his investigation. On May 21 Spitzer triumphantly announced that the firm had agreed to apologize for its actions, to pay $100 million in fines and to impose a series of reforms.

But so far Spitzer hasn't collected a penny. The settlement requires all U.S. states to sign on before payment is made. New Jersey and Missouri are holdouts. Investors will get nothing anyway: $48 million will go to New York, $50 million to other states and $2 million to the North American Securities Administrators Association.

While Spitzer railed against conflicts of interest, he may have had some of his own. He insists it wasn't wrong to accept a campaign contribution of $25,000 from Joseph Flom, the Skadden Arps partner who negotiated the settlement for Merrill, because the cash didn't come from Merrill itself. On Sept. 3 Spitzer accepted a $10,000 contribution from Stuart Subotnick, a director at Metromedia Fiber Network, whose chairman is being sued by Spitzer's office. Spitzer's spokesman says that donation will be reviewed.

Last July Spitzer met with a critic, Thomas Brown of hedge fund Second Curve Capital, who had accused Spitzer of grandstanding. Spitzer assured him that the Merrill fine was just the beginning and spoke of his plans to investigate new-issue allocations. The next day Brown posted Spitzer's comments on his own Web site. Brown says he didn't trade on Spitzer's revelations. Nonetheless, Henry Hu, who teaches securities law at the University of Texas law school in Austin, says Spitzer should have avoided even the appearance of impropriety.

The Spitzer crusade continues. Former star analyst Jack B. Grubman *(see box)* has already been humiliated. And Spitzer's investigations now threaten to topple Citigroup boss Sanford Weill. This attorney general is going places, and some people will have to be trampled along the way. ■

# The Scapegoat

JACK B. GRUBMAN IS ELIOT SPITZER'S FAVORITE WHIPPING BOY—AND THE REST OF WALL STREET, WHICH plied many of the same tricks, seems happy to let him stay that way. Grubman has been flayed in Congress, crucified by the Spitzer crusade, ousted from his job at Citigroup's Salomon Smith Barney and ambushed by a relentless CNBC camera crew. He has endured the embarrassment of watching his private, self-aggrandizing e-mails—collected by Spitzer's investigators—leak into the pages of the *Wall Street Journal*. In a 29-page lawsuit filed against five telecom execs, Spitzer cites Grubman 62 times; never mind that he isn't even a defendant. His alleged sin: He touted weak telecom stocks to help his firm win banking assignments from those companies.

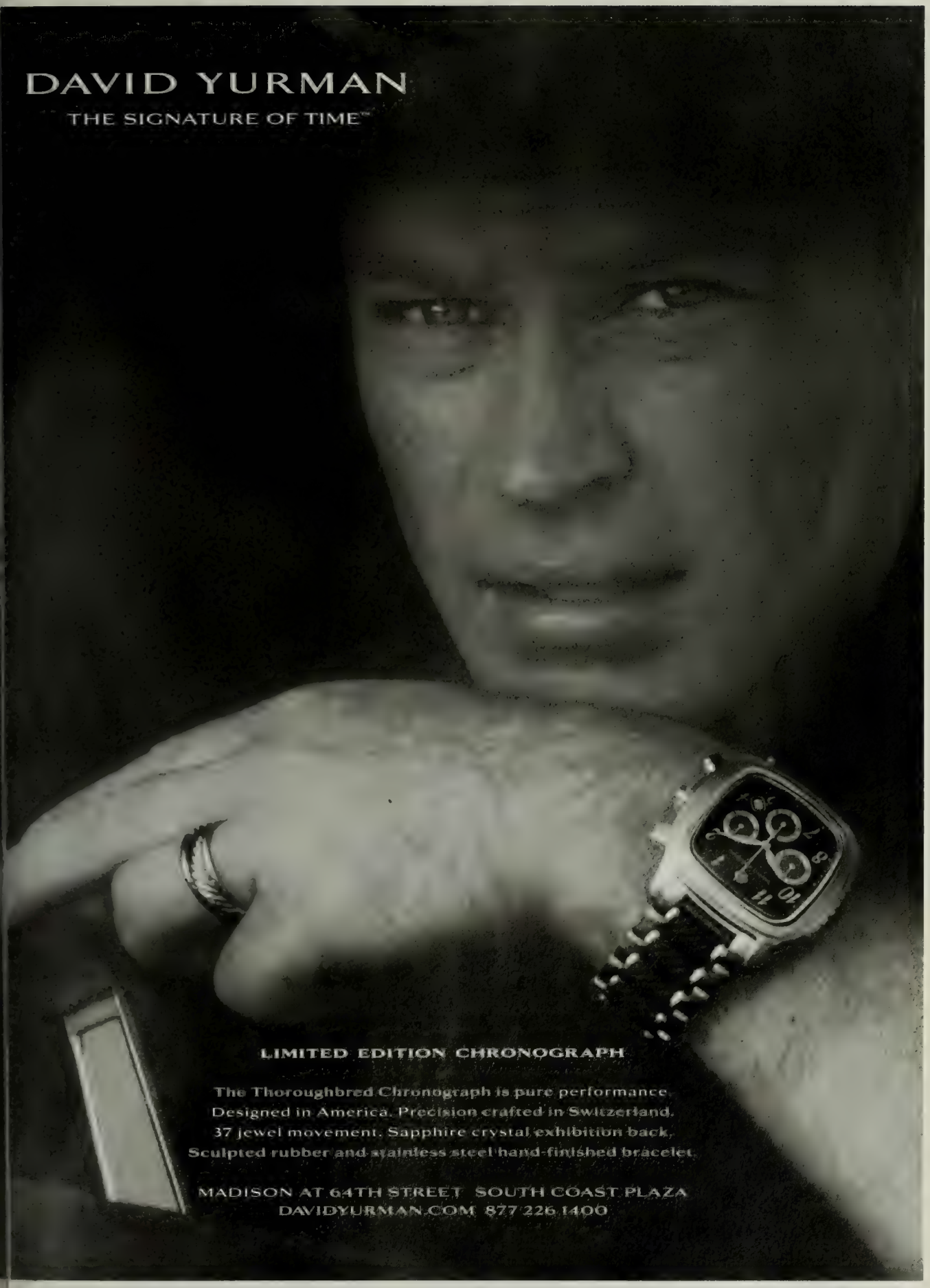
But if he did, so did his competitors at other firms—that's what being a sell-side analyst is all about. Moreover, for years Grubman's stock picks made money for investors. And while Grubman was reluctant to go negative on a falling sector, he bailed out earlier than some rivals—who haven't been called to Congress. "I've been looking for you," Representative Michael Castle of Delaware told Grubman at a hearing in July. "Not you individually, but the person like you."

Grubman is a victim of irate investors and cruel hindsight. When stocks roared, his close ties to Salomon clients were seen as an advantage. In 1997 the *Journal* hailed him as "emblematic of a new breed of Wall Street analyst." In 1999 he was *Institutional Investor*'s telecom analyst of the year, and a fan called him "the ultimate insider." In 2001 he bragged in *BusinessWeek*: "What used to be a conflict is now a synergy." Grubman first hailed what is now WorldCom at $2 in 1991, and it hit $62 in June 1999. In 1994 he touted Tel-Save (now Talk America Holdings) at $27, and it hit $84 in February 1998. He liked Metromedia Fiber at $1; it ran to $50 in March 2000. RCN Corp. went from $18 to $72. In 1998, if you followed every call Grubman made, you were up 57%. In 1999 his picks doubled in value.

Then came the crash, and investors looked back with anger on all the underwriting fees that had been pocketed by the firms with the bullish analysts. Salomon reaped a fortune on telecom ($1.1 billion) from 1996 to 2002; but so did Goldman Sachs ($855 million), Merrill Lynch ($808 million) and Morgan Stanley ($803 million). And their stock pickers were just as sanguine. Bear Stearns took in $293 million in fees; its analyst, James Henry, was bullish on 29 stocks. In March 2000, when WorldCom was at $45, the Wall Street consensus was a "strong buy"—and it still was a "buy" in March 2002, though the stock had dived to $6. On Apr. 23 Grubman soured on WorldCom, then at $4; but analysts at Bear Stearns, CIBC, Lehman Brothers, Robertson Stephens, Crédit Lyonnais and Kaufman Brothers didn't pull favorable recommendations until June 26—one day *after* WorldCom admitted to a $3.8 billion accounting error.

Jack Grubman is the scapegoat. The rest of Wall Street, it seems, is taking the Fifth. —*Emily Lambert*

**Bruised, battered and out of work: Jack Grubman.**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# Would You Buy a Chevy Saab?

## General Motors is gathering its worldwide forces to try to win on a field littered with GM corpses: midsize cars | BY JONATHAN FAHEY

NOW AVAILABLE FROM THE Swedish company General Motors bought in 1990: a saucy new Saab 9-3 sedan with rain-sensitive windshield wipers and cornering brake control. At $30,000, it will be aimed two ticks up the income scale from the pedestrian Chevy Malibu, which is due to arrive next August and will sell for less than $20,000. Unadvertised fact: The expensive car will share a chassis and many of its high-cost components with next year's Malibu—and also with the forthcoming Pontiac Grand Am, a new Saturn model and likely a Buick. The shared parts are the ones customers don't see. The outsides and the cabins will be very different.

If all goes as planned, GM hopes the coordinated global strategy will shave 30% to 50% off its engineering costs, which account for up to half of the costs of developing a new vehicle, according to James Queen, GM's engineering chief. In addition, the company projects, parts-sharing will shave 3.5% off GM's $100 billion annual outlay for parts. Yet another part of this cookie-cutter production is to lay out all the manufacturing plants the same way around the globe.

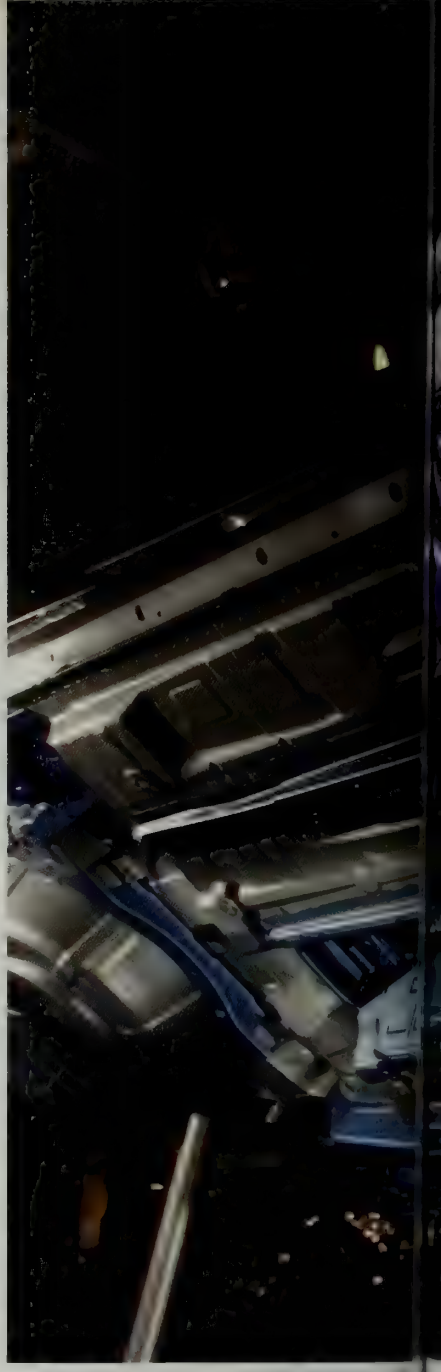
GM is far from the first carmaker to share engineering and parts across its model lineup. Look at Toyota with Lexus, Honda with Acura, Volkswagen with Audi. It's not even GM's first attempt to share design: Remember the Buicks and Oldsmobiles in the 1980s and early 1990s that were barely distinguishable from one another?

But this is the first time GM has worked with its divisions abroad, and it is the company's most ambitious attempt to leverage its global scale to reap savings. If the effort succeeds, GM can save its shrinking midsize-car share, now 29% *(see chart, p. 84)* in the U.S., from an unrelenting assault by Toyota's Camry and Honda's Accord. The Japanese think globally, so GM must as well.

"We can no longer afford the luxury of telling ourselves we're going after the domestic buyer," says GM Vice Chairman Robert Lutz. "That's just looking for a bigger piece of a shrinking pie."

A global strategy, though, is easier to envision than to implement. GM hasn't had any luck trying to move vehicles across the Atlantic. The Saturn LS and Cadillac Catera—rebadged Opels from its German division—have flopped.

One difference here is GM's plan to break down the fiefdoms that have operated among its divisions around the world. It was a historic event when 20 engineers each from GM North America, Opel and Saab gathered at the GM technical center in Warren, Mich. six years ago



to sketch a midsize chassis, name Epsilon, to be used by all three division GM bought Opel in 1929 yet never ha had a meeting like this to plan a new ca Epsilon could determine the fate of five c General Motors' car divisions: Chevrole Opel, Pontiac, Saab and Saturn. Gener Motors sells 5 million passenger car worldwide every year. But none of thes marques makes money selling cars. Op has lost $2 billion over the last three year Saab hasn't made GM money over the 1 years it has been under GM control *(s related story, p. 88)*. In North Americ GM loses more than $1,000 on every pa senger car it sells.

GM's Jim Queen under the new midsize chassis.

The first Epsilon-based car, the Opel ectra, debuted in Europe this spring. ext (and the first available in North nerica) is the Saab 9-3, to be assembled Trollhättan, Sweden. Then comes the w Malibu and a new Grand Am in 04. All told, six to eight plants in urope and North America will make as any as 1.4 million Epsilon cars a year r as many as seven brands in 13 body les. GM will soon build all of its cars, m small to luxury, on similar so-called bal architectures.

Each Epsilon-based car will have the me 4-foot-long steel midsection to ich a set of parts—whether for a Saab or Malibu—can be attached at the same place on the assembly line, and in the same way. That's where the savings come in. The midsection and most of the parts are designed once. Plants don't have to be overhauled to accommodate different cars, and the car bodies don't have to be retrofitted for snazzy features. And engineers will be able to mix and match components to avoid the danger of every car's having the same driving feel. "Almost like a set of Lego bricks," explains Lutz.

Every Epsilon car will weigh somewhere between 3,200 and 4,000 pounds. The angle of the windshield will be changed by as many as 4 inches to make, say, a Grand Am sportier than a Malibu. The cars can vary in width by 2 inches and in length by 6 inches—the larger size to be used for a wagon version of the Malibu. The cars will range in price from $19,000 to $35,000.

Several different engines can be dropped in, like a turbo—necessary for Saab's peppy image—or a fuel-efficient four-cylinder for the Malibu. Different combinations of disc and drum brakes can be attached to keep Malibus low-priced but let Saab boast serious stopping power. The bracket where the suspension is attached to the frame was designed so it can be attached at two different places.

'03 Saab 9-3

'04 Chevy Malibu

New Opel Vectra

## Three Cars—Or One?

These new and forthcoming autos share a 4′ x 4′10″ midsection and hundreds of other parts you can't see. GM hopes the formula will cure the rental-car blues.

| SAAB 9-3 SPORT SEDAN | OPEL VECTRA | CHEVROLET MALIBU |
|---|---|---|
| ON THE MARKET **OCTOBER '02** | ON THE MARKET **APRIL '02** | ON THE MARKET **AUGUST '03** |
| PRICE **$30,000** | PRICE **$30,000** | PRICE **$19,000** |
| PROJECTED ANNUAL SALES: **25,000** | PROJECTED ANNUAL SALES **300,000** | PROJECTED ANNUAL SALES **MORE THAN 200,000** |
| UNIQUE FEATURES: Turbo engines; tight suspensions | UNIQUE FEATURES: Fastest Opel ever: The sporty version goes 150mph. | UNIQUE FEATURES: Remote starting; European chassis for American price |

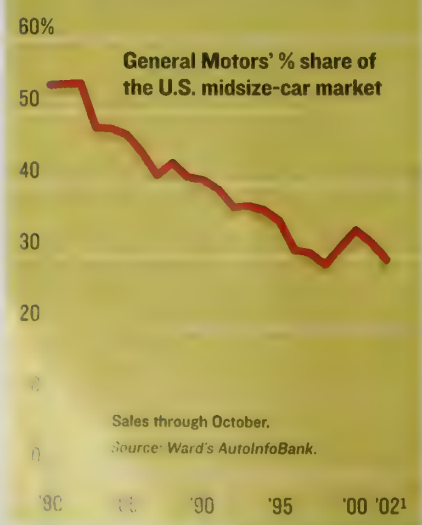
Saab suspensions will be located farther forward and include unusual bushings that will make for an edgier ride: The rear wheels will turn a few hundredths of a degree left when the driver steers right, to allow the car to whip around tight turns. Malibu suspensions will be mounted for U.S. drivers and roads. With the bracket farther back, the car will better smooth over what GM engineers call "a maximum pothole event."

The engineers had to make compromises that could end up pleasing neither American nor European drivers. Europe wanted drivers to fill their gas tanks on the passenger side; North America wanted it on the driver's side. Europe won. North America wanted a stronger knuckle in the steering mechanism, where the wheel is attached to the suspension, to deal with potholes. North America won. Europe wanted Epsilon to ace European side-impact safety tests; North America wanted the structure to ace North American front-impact tests. They both won, but the structure, and the car, got heavier because of it.

All of GM's car plants will soon be laid out in the same way, regardless of what's built there. Every Opel Vectra made in Rüsselsheim, Germany will get its engine bolted in at the same point on the line as every Chevy Malibu built in Fairfax, Kan.

### Homesick

GM is losing grip on the heart of its home market, midsize cars. Spicy new entries for Chevy, Pontiac, Saturn and Buick are designed to halt the slide.




Sales through October.
Source: Ward's AutoInfoBank.

This saves plant engineering costs and helps each new plant learn from the mistakes of the plant before it.

GM hopes to save by engineering common parts that customers don't see or care about. Where once the company had 30 different electronic control units for power windows and horns, it now has 2: a high-feature one and a low-feature one. Instead of buying a few thousand of each, GM will buy 2.2 million.

The early product looks good. Opel has added extra shifts to make new Vectras, and the Saab 9-3 is on the shortlist for North American Car of the Year. But the company needs big hits for its major North American brands, Chevy and Pontiac.

Focus groups, at least, like the cars. Lutz says the Grand Am scored the highest research numbers ever seen at the company: 60% of the participants picked the unbranded Grand Am as their first choice among a roomful of Japanese and European cars.

That focus group, however, underscored just how huge a hurdle Epsilon must leap—namely, GM's brand image. When it was revealed to participants in the Pontiac focus group that the car they liked best was a Pontiac, one-third decided they didn't like it best anymore. "The only way you can get buyers to switch to a Chevy or Pontiac is to build something that is head and shoulders above the competition," says Christopher Cedergren, president of Nextrend, an auto consultancy. "These products will have to be sensational."

# BUSINESS TRIVIA QUESTION

*Number 19*

VeriSign processes over
$3.7 billion in payment transactions
per quarter.

❑ True?
or
❑ True?

ıy also be news to you that VeriSign handles e-commerce payments for some 80,000 different businesses and protects more than 000 websites. You see, VeriSign has spent the last seven years building a secure infrastructure for the Internet. We'd like to do the same our business. VeriSign can help you deploy a trusted infrastructure so you can conduct secure communications and transactions. matter how many e-commerce payments your company handles, you'll know every last one of them is secure.

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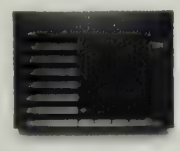

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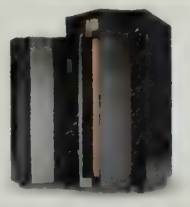

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# Luxury: The Cure du Jour

Why does almost every carmaker in the world want to get into the business of making luxury vehicles? Because it's easier to make a profit charging $50,000 for a car than $15,000. This is the common wisdom.

And it's wrong. The greatest fortune ever made in the auto business was made by Henry Ford on his low-priced Model T car. General Motors made its big bucks on millions of Chevrolets. Honda, Toyota and Volkswagen made more money than Rolls-Royce. If the luxury business is so good, where are Packard, Duesenberg and Marmon?

But this is not a history lesson. This year Jaguar is losing $500 million, and I figure that Land Rover, which makes expensive sport utility vehicles, is losing $100 million to $200 million. Saab, owned by General Motors, has luxury aspirations and is losing money. Infiniti, the luxury division of Nissan, just now seems to be recovering after a decade of failure. Lincoln seems lost. But even lost, Lincoln sells more than twice as many Lincoln Town Cars as Lexus, the much-praised luxury division of Toyota, sells of its $55,000 LS luxury car.

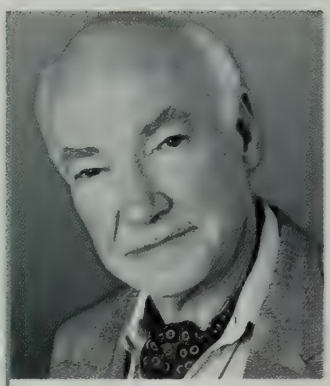
**Automakers are in love with the luxury-vehicle business. Why? The luxury market is tough. Despite the common wisdom, high prices don't guarantee high profits.**

The point isn't that luxury vehicles can't make money. Of course they can. But the luxury market is tough. A high price does not guarantee a high profit.

The market has been growing, especially in what we call the "near luxury" group, which means cars priced at $30,000 to $45,000. Why is this new market growing? I always figured that people had money, the cars are pretty good and the nameplates—BMW, Mercedes, Lexus and the others—carry prestige. That shows you how old-fashioned I am. A survey from the Boston Consulting Group set me right: "New luxury is a response to broken relationships, job dissatisfaction, loneliness and other stresses in contemporary life."

But I can't help wondering if carmakers wouldn't be better off sticking to what they know rather than diving into the luxury market trying to help all these troubled souls by selling them prestige cars.

For example, wouldn't Ford be better off fixing its Focus small car instead of spending billions of dollars buying luxury brands?



Wouldn't GM be better off designing some new Chevrolets with the money spent on Saab?

And wouldn't Volkswagen be better off expanding its low-priced line instead of trying to turn into a luxury-vehicle company?

We remember VW as the maker of the Beetle, that great low-priced car designed even before World War II, and later the small Golf, Europe's bestseller.

Its previous chief executive, Ferdinand Piech, spent billions of dollars pushing VW up the income scale. He bought Lamborghini and Rolls-Royce/Bentley (but he was forced to give Rolls to BMW and ended up with Bentley), and the Bugatti name. He ordered luxury models for the VW line, too, and new factories to build the luxury models.

VW has three luxury models: the Passat W-8 (with an eight-cylinder engine of a new shape), on sale now and costing close to $40,000 here; a sport utility called the Touareg, costing $35,000 to $40,000, due in the spring; and the Phaeton, costing $60,000 to $70,000 (or more) and coming here next summer.

The Passat W-8 has left car testers underwhelmed. Only 2,000 have been sold to date in the U.S., against the 5,000 VW had hoped to sell. The Phaeton is a question mark because Americans (and Europeans, for that matter) may hesitate to pay $65,000 for a Volkswagen, even if the model is a credible competitor to the Mercedes S class.

The key vehicle is the Touareg, VW's first SUV. If you are wondering, the name comes from a tribe of Sahara wanderers known for their blue-dyed bodies and their talent for torture.

Volkswagen wants to sell 35,000 Touaregs a year here—not many compared with 400,000 Ford Explorers sold in a year, but still an ambitious goal. Hurting Volkswagen here will be two things: It has no reputation in the SUV market, and its loyal customers are not used to spending $35,000 to $40,000.

Volkswagen has created another little problem for itself. It's a bad idea to use a foreign name that Americans can't spell or pronounce.

Frankly, I'm more excited about that New Beetle convertible that is coming out now than any VW luxury car or $40,000 VW sport utility. And I can't help thinking maybe Volkswagen would be better off being Volkswagen—not Bentley or Lamborghini or even a Phaeton.

Forbes.com

Jerry Flint, a former Forbes Senior Editor, has covered the automobile industry since 1958. Visit his home page at www.forbes.com/flint.

A STRONG HINT THAT SOMEthing isn't quite right with Masco Corp., the maker of faucets, plumbing supplies and cabinets: Only 7 of 13 analysts ave a buy recommendation on the stock. nalysts are supposed to be slavishly optimistic. What are they worried about?

Not the top line. Revenues have risen an average 10.3% annually in the last decade to an expected $9.4 billion this year. Net profit should come in near $800 million, if you don't count writeoffs for nonrecurring items like a major class action settlement.

You get a grimmer picture from those special charges—and from the balance sheet. Since 1999 the company has written off $841 million as a result of various business fiascos. One-third of its current assets, or $3.5 billion, consists of goodwill; $1 bil-

Slowing to a trickle: Charges and writedowns keep foiling Richard Manoogian's growth plans.

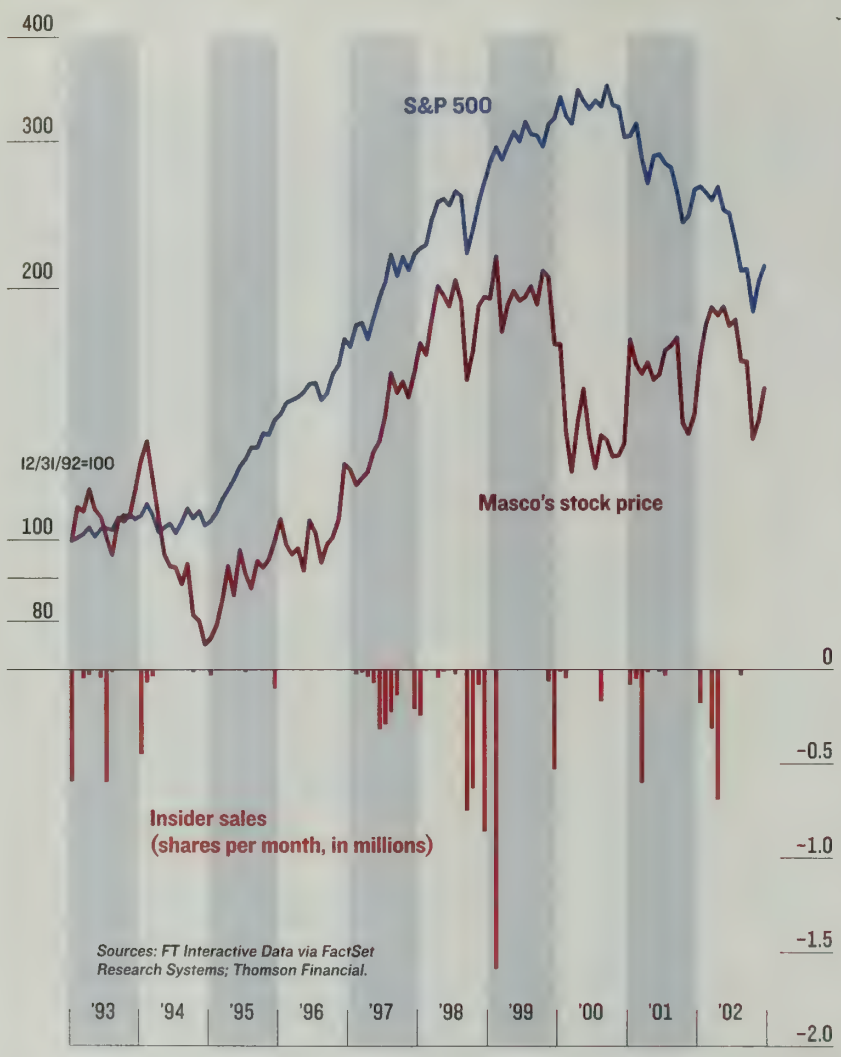
# A Leaky Affair

## Under its founder, faucetmaker Masco was a classy growth stock. Under present management it's a more dubious proposition.

BY MARK TATGE WITH ERIN KILLIAN

## Great Timing—or Odd Coincidence?

Led by Chairman Richard Manoogian, Masco insiders have demonstrated an uncanny sense of where the high points are in the stock, often selling at or near the top—and before the share price declines. They could sure teach market timers a thing or two.




lion of that may be impaired and therefore subject to a writedown, possibly as soon as next year under the new accounting rules that eliminate goodwill amortization. This damage is due chiefly to past failed strategies and a slowdown in its core businesses. Masco is loaded down with $1.2 billion in debt taken on over the last three years for the acquisition of six companies that installed insulation, plumbing supplies and windows. Result: an erosion of its major operations, a drop in the cash-flow-to-debt ratio from 32% in 1998 to 25% and a downgrading of its credit risk by Standard & Poor's from A– to BBB+. In the last decade the stock has appreciated on a total return basis 7.4% a year, trailing the 9.9% increase in the S&P 500 index.

If this is a company focused on shareholder value, it's a few particular shareholders who get a disproportionate share of the value: Chief Executive Richard Manoogian and his lieutenants. Filings over the years to the Securities & Exchange Commission show a persistent pattern of self-dealing at the top. Executives have benefited from insider loans, well-timed stock sales and deals involving artwork, as well as from business steered to relatives—behavior that has been encouraged by cross-board directorships with Masco affiliates.

What does Manoogian say? Nothing. "He's simply too busy" for an interview, says a spokesman.

This is no longer the sparkling growth company created by entrepreneur Alex Manoogian. He launched Masco Screw Corp. in 1929 as a supplier of machined automotive parts but built the company on something entirely different: one of the first single-lever hot-and-cold faucets, sold under the brand name Delta. Delta was a winner, and the family fortune reached $570 million in 1996. Until Manoogian came along, the faucet industry was highly fragmented and the products were mostly sold by plumbing wholesalers. Masco was the first to advertise faucets on television and it captured the mass market as distribution shifted to retailers like Sears and Kmart. The founder died at 95 in 1996.

Son Richard, 66, has been with the family business his entire career. He wanted to take his father's success in plumbing fixtures into new territories—cabinets and furniture. The idea was to take advantage of the same retail channels to sell related building materials. Starting in the mid 1980s Masco began acquiring furniture makers—Drexel Heritage, Henredon and Universal. Dominance, Manoogian figured, could help him lower manufacturing costs and establish national distribution in another highly fragmented industry. Trouble was, the companies Masco assembled had once been spirited rivals and had no inter tion of working side by side. Compounding the problem was Manoogian's ambitious push to create his own brand of furniture, called Lineage, which would sell not just furniture but companion rugs, accessories and artwork supplied by Masco. Retailers didn't bite.

The furniture businesses did not work out. Anxious to unload the mess, or at least enough of it to avoid having to consolidate the furniture losses on its own income statement, Masco sold off the division in a leveraged buyout by management in 199 Masco supplied some financing, taking back some of its sale price in the form debt and preferred stock. Masco took a $650 million writeoff in 1995. But the calamity didn't end there. Still retaining a share of the unit, Masco wrote down $4 million last year—and listed a $17 millio unrealized loss on 4 million furnishing shares and other securities as of June 2 2002. Total loss on the furniture busine

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# Energy Strategies For a Changing Market

by Peter R. Jump

It's surely an understatement to say that 2002 has been a difficult year for the energy industry. The Enron collapse, a weak economy and continuing threats of fuel shortages have all contributed to a loss of confidence in the industry. Some companies have seen dramatic decreases in both stock prices and investor confidence in their firm.

In addition, the federal government has not been able to help. While the Bush administration's energy plan concluded that domestic supply must be increased to secure future supplies, many in Congress questioned the need for more exploration and production in environmentally sensitive areas. So a long-awaited energy bill got stuck in a Congressional Conference Committee, and no one knows whether or not a lame-duck session can hammer out a consensus. While many of the recommendations in the Bush energy plan can be initiated without Congressional approval, some of the more "visible" recommendations, such as oil exploration in the Arctic National Wildlife Refuge (ANWR), do need Congressional action.

In addition, the Federal Energy Regulatory Commission's (FERC's) attempts to further define wholesale electric markets have met with a mixed verdict.

All these factors add up to an industry not knowing whether it will see growth in the near future. In particular, the utility industry, once seen as a sure bet, has been faced with conditions that are a great recipe for declining revenues and falling stock prices.

In the fall, the Department of Energy's (DOE) Electricity Advisory Board endorsed a report concluding that this uncertainty is driving away capital, making it difficult for the capital-intensive industry to expand.

It might seem as though all the news is gloomy. Behind the headlines, however, there are some positive developments. For instance, a group of industry trade associations is working on corporate governance standards. CEOs have told the associations that efforts to restore investor and public confidence are a top priority. And while some regions look at the FERC's standard market design proposals as a threat to regional and local autonomy, many in the industry see them as a basis for more discussion. The DOE's Advisory Board says the

## PSEG

New Jersey-based PSEG continu to target 7% earnings-per-share grc over the long term.

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- A successful outcome to the company's latest rate case. The company is seeking an annual increase of $250 million.
- Modest improvements to global operations at the same time that other utilities are facing large los from overseas affiliates. PSEG is cutting overseas costs in an atte to increase the return on capital.

Underlying PSEG's strategy is a large, diversified portfolio of ener businesses that have realistic pla for growth. The company does no hype short-term expectations to shareholders. Chairman Jim Ferla told shareholders earlier this yea the company's prime objective is deliver value over the long term.

**PSEG's energy traders maximize t value of their generating assets a continue to deliver strong results minimizing risk.**

# POWER POSITION

[ANOTHER REASON PSEG HAS WALL STREET'S ATTENTION]

In the energy business, one key to being a successful player is strategic positioning in a stable, profitable marketplace. As a market leader, PSEG has helped make PJM (the Pennsylvania, New Jersey, Maryland network) one of the most highly regarded power pools in the U.S. It's a location which provides a sound trading environment, supportive regulations and extensive transmission access. But this doesn't mean the company is resting on its accomplishments either—PSEG continues to expand its generating capacity here to meet the burgeoning energy requirements of the region. Talk about being positioned for success.

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proposals should help restore the flow of capital to the energy sector.

On an individual company level, surveys continue to indicate that while consumers might have low opinions of corporate executives as a whole, they continue to "trust and support" their local electric utility. A September survey, released by RKS Research and Consulting of Salem, N.Y., found U.S. heads of households to believe that utilities are more trustworthy than companies in general by a six-to-one margin. Consumers also believe utilities are more accountable than U.S. businesses overall.

Most importantly, as the economy rebounds and the demand for energy continues its historical increase, new infrastructure will be needed. For over a decade, electric transmission line construction has been falling behind the growth in demand for electric power. As a result, more lines are desperately needed. In the next few years we can expect to see the retirement of many older power plants. These plants will need to be replaced. One consultant predicts that more than 60,000 MW of older coal plants will be retired because owners can no longer foot the bills for environmental upgrades.

Following the Enron implosion and the depression of wholesale markets by the weak economy, there's no doubt that investors are rewarding companies that stick to core competencies. The Edison Electric Institute, a trade association for shareholder-owned utilities, has thereby launched a print advertising campaign to bolster investor confidence in the industry. The campaign reminds investors that utilities own real assets, such as power plants, transmission lines and distribution systems.

In a similar vein, New Jersey-based Public Service Enterprise Group (PSEG) has pulled back from some overseas operations — particularly in countries going through political uncertainty, such as Argentina and India. Combine the moves with significant cost-cutting initiatives already under way, and the company believes its overseas arm — PSEG Global — can remain a steady contributor to earnings and cash flow. In addition, the company uses its retained earnings as a primary source of new capital. As a result, PSEG finances its construction and investment programs almost entirely with internally generated funds.

The market has been telling companies that pulling back from overseas trading operations will be rewarded. In October, Columbus-based American Electric Power decided to get out of continental European energy trading because it had no real assets there. Its stock price increase was immediate. At the same time, TXU of Dallas was saying it did not know why its stock sank nearly 40% in one day (to a 20-year low). However, some analysts attributed the decline to a ratings cut of TXU's European unit to "junk" status by a ratings agency. TXU and AEP were not alone. The whole utility industry came under close scrutiny in 2002. At one point in October, the Dow Jones Utility Average was down 33% for the year.

The common theme seems to be those who are most involved in energy trading are suffering the most. Those who stick to the old core competencies of generating and transporting energy are on a sound footing for the future. ■

*Peter Jump is an energy and public relations consultant in Charlottesville, Va.*

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INSIDE TRACK

## Customer Service—to the Max

**Masco pays attention to Wall Street—at least to analysts who can make a difference.**

**People like Stephen S. Kim, who follows Masco for Salomon Smith Barney. According to his former colleague, Kenneth A. Boss, Kim, a fan of Masco's stock, was putting a two-story addition on a turn-of-the-century $975,000 colonial fieldstone mansion in Briarcliff Manor, N.Y. this spring. Part of the estimated $1 million renovation included gutting the kitchen and installing Masco's semicustom Kraftmaid cabinets purchased through a local distributor, Boss says. A non-Masco installer botched the job; the cabinets didn't fit right.**

**Kim, Boss reports, called Masco to complain. "That is where his influence was the greatest and he decided he would get the quickest response," says Boss. (Boss has an ax to grind: He was fired earlier this year, he claims, for blowing the whistle on Kim; a Citigroup spokeswoman says it was for poor performance.) In any event, Boss is suing Salomon in the U.S. District Court in New York, alleging he was wrongfully terminated and that Salomon routinely cooked research to win investment banking deals from clients like Masco.**

**Kim's timing couldn't have been more fortuitous. Masco had just done a secondary offering of 22 million shares, with Salomon as the lead underwriter on the deal, and investors weren't going for it. At that time, according to an affidavit by Boss, Kim embarked on a four-to-six-week phone campaign and "pressured the management of Masco to 'help' with the installation of his new kitchen." (Citigroup says "the allegations are entirely without merit.") Presumably, the last thing Masco wanted was to tick off a powerful analyst whose rating of its stock packed so much weight. For whatever reasons, Masco sent two executives from its Kraftmaid division to Kim's home to fix the problem at Masco's expense, Boss alleges. Estimated cost to Masco: more than $10,000. Kim still has a buy rating on the stock.** ***—M.T.***

an estimated $2 billion, say analysts.

The auto parts business wasn't doing too well, either. Masco spun it off as Masco Industries (later renamed MascoTech) to shareholders, retaining a 44% interest. But Manoogian was reluctant to dispose of it entirely. Even after the division started trading separately on the NYSE in 1993, the two companies shared ownership, directors, even funding. Again and again MascoTech bought Masco shares; Masco repaid the favor by buying MascoTech's debt. For a long time Manoogian refused to unload Masco's 44% stake in MascoTech, even though it dragged down earnings.

Finally, in 2000, he agreed to sell MascoTech to a buyout fund controlled by David Stockman, the former Reagan Administration budget director, for $2 billion. Manoogian and other Masco executives would retain 20%. But according to a lawsuit led by Crandon Capital Partners, insiders failed to get the best possible price and were trying to keep portions of MascoTech for themselves without compensating shareholders. The suit was settled with MascoTech for an undisclosed sum.

No case better illustrates the intertwining of personal interest and public company than Masco's foray into art, justified, according to SEC filings, because fine art could help sell kitchen cabinets and faucets, particularly at builders' conventions and furniture trade shows. Masco bought $58 million worth of paintings, sculptures and artifacts from Manoogian. These works were sold at a "substantial discount from the estimated replacement value of the art and below Mr. Manoogian's cost, including interest," says Masco's 1993 proxy statement. But dealers involved with the purchase and sale of his art say they think Manoogian may have been cleaning up his collection of late-19th-century paintings, getting rid of what he didn't want.

Masco didn't just stick itself with lesser paintings. Continuing the strategy to create a diversified supplier of goods to home-improvement retailers, it bought Behr Process Corp., a main supplier of paints and stains to Home Depot. It seems that Masco paid a little too much. More than a year before it announced the acquisition in September 1999, a suit against Behr claimed that its stain caused outdoor furniture to mildew and failed to protect against sunlight and moisture. The suit was finally settled last month for $166 million.

Masco did not tell its shareholders what it spent on Behr, choosing to lump the price tag in with a second all-stock acquisition occurring more or less at the same time, that of cabinetmaker Mill's Pride. Combined, the two deals cost $3.1 billion, adding 30% to Masco's share base and diluting earnings. Manoogian and other insiders insulated themselves from some of the dilution, dumping 925,000 shares at an average price of $29 in November 1998.

They got back in, cheaper. In 2000 the company initiated a stock-purchase program in which 300 employees borrowed $156 million from banks to buy newly issued shares at $18.50, the market price then, with Masco guaranteeing repayment. Manoogian and six other officers accounted for a third of this buying. During 2001 Manoogian's son Richard Jr., 30, acted as Masco's broker, bringing his employer First Union Securities $1.8 million in commissions.

This year the smart money was back on the selling side. Just as Masco was preparing a $613 million offering in May of 22 million shares, but before a public disclosure of the offering, insiders began unloading the stock—988,000 shares, worth $25.3 million between Feb. 20 and Mar.

Perhaps few of these shenanigans would matter if Masco were riding the housing boom. But it's not. Once the top faucetmaker with a 32.2% U.S. market share, it has fallen to 26.9%, behind Fortune Brands' Moen unit, with 31.4%. Sales from its Merillat cabinet unit, a onetime industry leader, fell from an estimated $6 million in 2001 to an estimated $550 million this year as Masco tried to eliminate distributors by selling directly to builders. In February Home Depot canceled Masco as the maker of its Thomasville cabinets after lengthy delays and startup problems. The business went to Fortune Brands.

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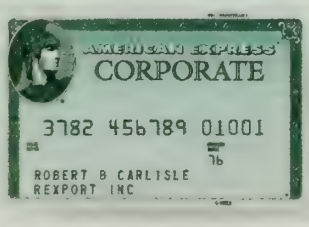


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AMERICAN EXPRESS

# Takefuji's Trial

## Barbarian hordes (Citigroup and GE) lay siege to the palace of Japan's consumer finance king.

BY BENJAMIN FULFORD

Sake and rules: Takefuji's boss Yasuo Takei.

IT'S FRIDAY NIGHT AT THE PALATIAL Tokyo home of Yasuo Takei, the king of Japan's consumer finance industry. Scores of worshipful uniformed employees gather to receive words of wisdom from the boss: tips on manners, proper ways to bow, rules for dunning and the techniques for screening loans. Takei, 72, then hands out individual cups of sake, quizzes everyone about their loan balances and dispenses advice: "When you get to be a branch manager you will be able to afford to get your teeth fixed," he tells one young woman. Following karaoke and bingo, the troops are sent home in buses.

Scenes like this, played out weekly, show how far Takei has come from errand boy for his mother's small grocery shop to builder of Japan's most profitabl financial corporation, with 2,415 shop that lend out money to consumers at up to 27.3% interest, generating more absolute profit than banks lending close to a hundred times more money.

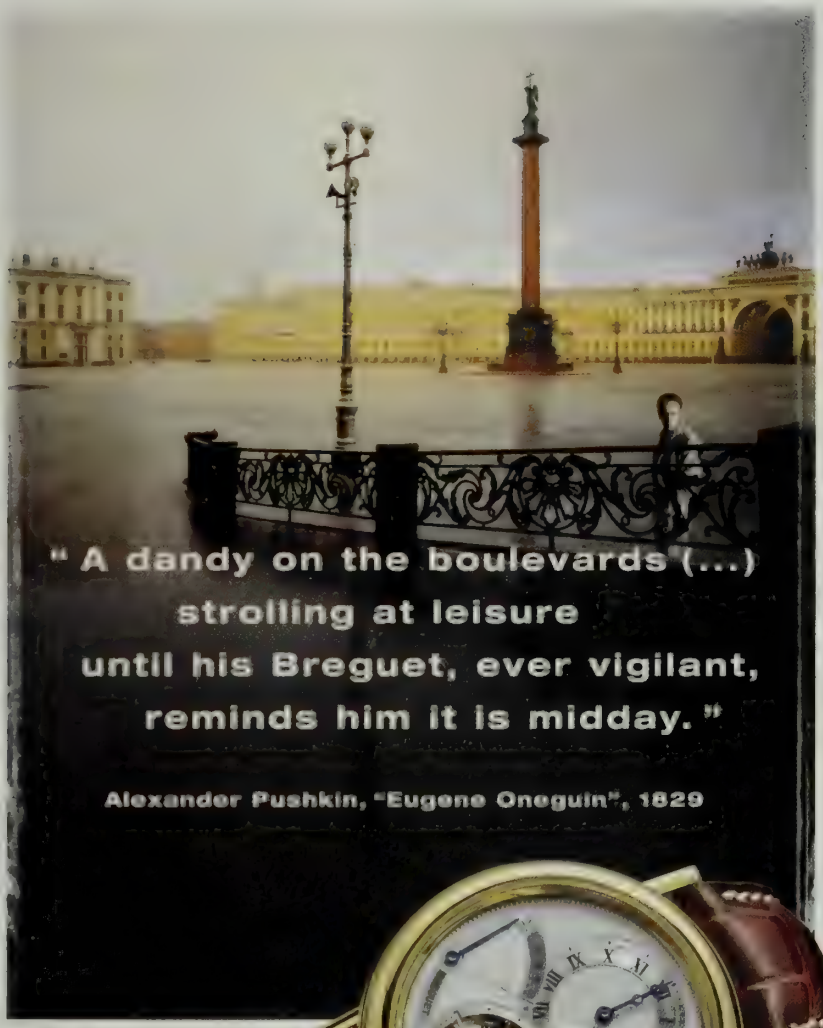
Now, however, his Takefuji is facing th biggest test of its 37 years. With a loan book of $14 billion, Takefuji's profits are expectec to fall to $1.4 billion in the fiscal year end ing in March 2003, down from $1.8 billioı a year before. Takefuji's stock price at $40 i a quarter of what it was in 1999. Takei's per sonal fortune (he and his family own 66% of Takefuji shares) has consequentl plunged to $4 billion, from $15 billion.

Partly to blame is Japan's deflationar economy, which is squeezing the pay o Takefuji's borrowers even as their loa principals remain unchanged. Persona bankruptcies are thus on the rise. But eve more threatening is the invasion of th Japanese market by GE Consumer Cred and Citigroup, which come armed respec tively with S&P AAA and AA+ credit rating as well as with the latest information tech nology and cost-cutting know-how bui up through long experience in dozens c countries. Through buyouts over the pa few years, they now control 21% of th subprime lending market.

But they are facing a clever man wit a 17% market share who says that he ca feel credit risk with his skin. Takei, wh claims to have gotten by on two hours c sleep a night for the 30 years of his clim to the top, didn't see the potential of sul prime finance until he was 34. In Japan was then an industry controlled by shac street lenders. A trip to America gave hi a look at how such U.S. consum finance companies as Household ar Beneficial (now part of the same co glomerate) did business.

He then added his own know-how start lending to people living in Japar public-housing projects. At first Takei ta geted women—he thinks they are "mu more reliable than men." He developed u usual ways to judge creditworthiness, su as seeing whether their houses were tidy whether they consistently paid their re on time.

One day, when he noticed that a bc rower's hands were trembling as he fill



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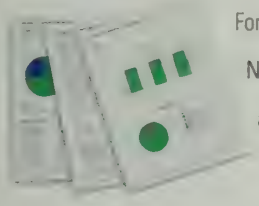

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out his loan application, Takei realized that he had to dispel such fear if his industry was to grow.

Over the years he has created a winning formula of cheerful shops and sophisticated credit-risk analysis that has been imitated by his competitors. A loan application form requires such information as the number of employees at the applicant's place of work, his job description and marital status (the majority of the borrowers are now males in their twenties and thirties). It also asks who at work can be relied on to pass on messages from Takefuji. In other words, every borrower must leave a trail.

Two-thirds of Takefuji's outlets are automated with ATM-like terminals connected to employees at a remote location who process loan applications.

At manned outlets, customers sip tea as their credit checks are run. After the screening, a new customer (60% to 70% are accepted) is escorted to the elevator and given a pair of socks or a handkerchief as a parting gift. The maximum size of a loan is $4,100, or 10% of a person's annual income, whichever is less.

Not everything about this style of business is rational. Takei admits to extensive reliance on soothsayers, fortune-tellers and psychics for help with important business and personal decisions. "Psychics have helped me avoid many bad business deals," he says. He also refrains from making decisions on bad luck days noted on traditional Japanese calendars.

Will such methods prevail over more orthodox Western business techniques?

Too soon to tell. Citigroup has spent an estimated $1.4 billion over the past two years to buy the shattered remnants of small and midsize Japanese consumer-finance companies that were vanquished by Takei. Almost unnoticed, it has cobbled them together into what is now the third-biggest consumer-finance company in Japan, with a loan book totaling $13 billion. There is no sign that the shopping spree has ended.

Citigroup's strategy is to take advantage of U.S. accounting rules and its Aa1 Moody's credit rating to raise funds at lower cost than Takefuji, which has a bond rating of A3, five ranks lower. According to Dean Perry, an analyst at ING Barings in Tokyo, U.S. accounting rules require Citi to hold capital that is worth only 10% of its loan portfolio. Citi can thus get a return on equity of 30%; a Japanese buyer, needing to keep 30% capital, can only manage 9%, he says.

Another part of the strategy is to invigorate the absorbed small lenders through infusions of its know-how and the latest risk-assessment algorithms, according to an article by Hiroshi Domoto, a professor at Tokyo Joho University. Such Japanese lenders can be bizarrely primitive. Some have reportedly resorted to creating a fake computer terminal with a man hiding behind it, attempting, in the manner of the Wizard of Oz, to imitate the automated loan-processing machines used by the bigger Japanese lenders.

GE Consumer Credit, meanwhile, is applying its own famous brand of corporate discipline on Lake, the fifth-largest Japanese consumer-finance company, which it bought for an undisclosed amount in 1998. It has already shaken up the industry by centralizing its call centers to more efficiently handle the labor-intensive process of dunning borrowers who are slow to pay, company spokeswomen say. The next step is to shift back-office work to call centers in Dalien, China, where there are plenty of Japanese-speaking Chinese ready to work at a small fraction of Japanese wages.

Over a dinner of raw tuna and stew, Takei was dismissive of the foreign threat. He pointed out the failure by Household Finance and others to penetrate the Japanese market during the 1970s and 1980s. "Their methods are too antiseptic," he says. He explained that Takefuji's employees have been rigorously trained to be so polite and friendly to customers that "they will always pay back their loans to us before they pay anyone else." Using Chinese callers would almost certainly alienate Japanese borrowers, he says. The quality of the companies and the borrow ers that Citigroup has acquired is sucl that "for every $100,000 in bad loans w get, they will get $300,000," he promises

Then there is the matter of the near religious admiration and devotion o Takei's employees. A longtime Take friend and financier explains, "There i no other company in Japan where a 25 year-old girl with [only] a high-schoo education is invited to the chairman house and can become a branch manage earning $70,000 a year."

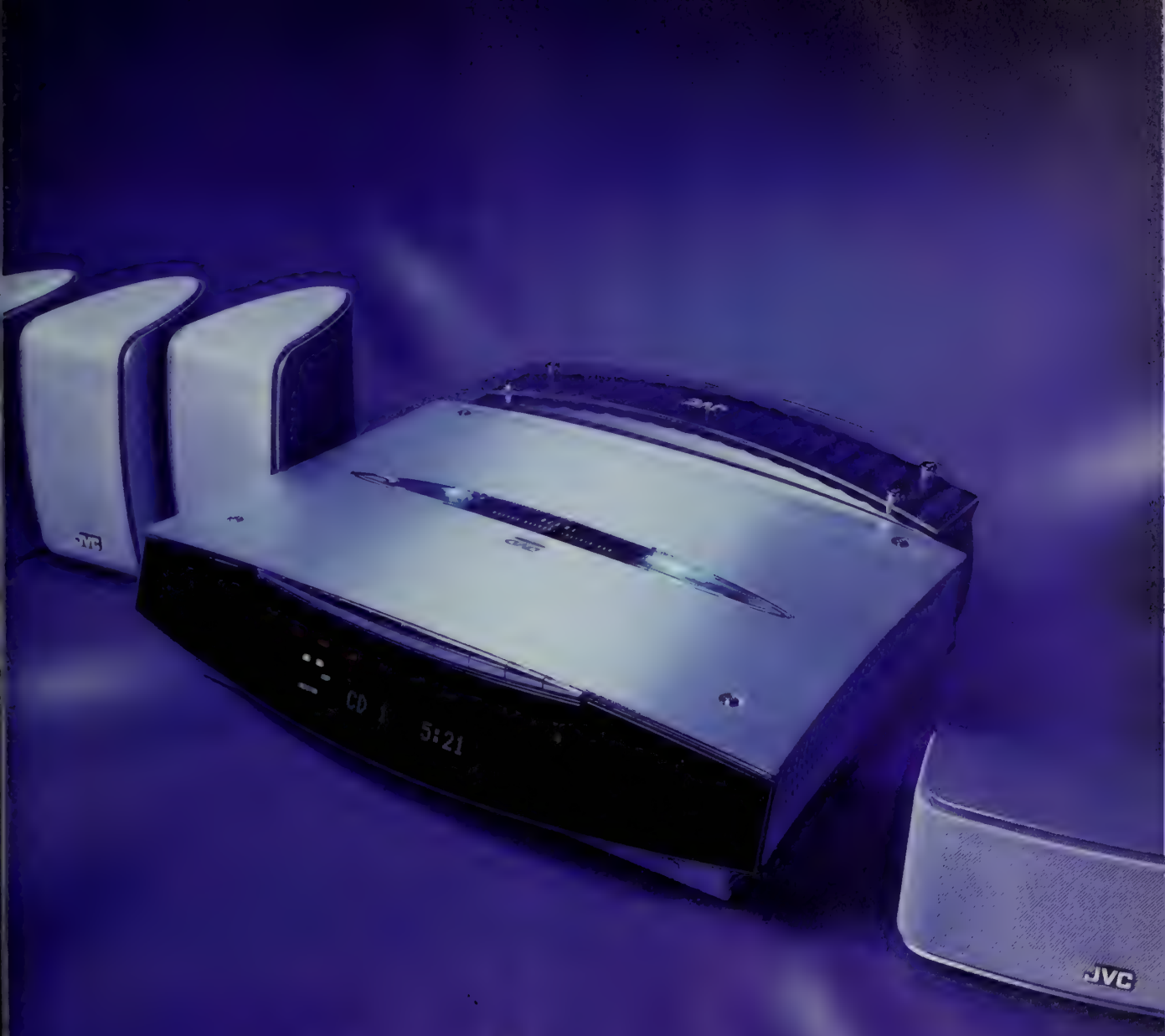
Although confident, Takei admits tha now is a time to hunker down. Takefuji i screening more strictly. Its only big ne move is to start issuing MasterCard Takei says that unlike both the foreig giants and such large domestic rivals a Aiful, which is getting into second mor gages, he is reluctant to try to expan aggressively into businesses he does n fully understand, especially while Japan economy remains in a state of crisis.

**"A 25-year-old girl with a high school education can be a branch manager earning $70,000."**

Also, as with U.S. consumer finan companies, lawyers in Japan are now qui to seize on individual cases where overeag dunners break the rules trying to get deli quent borrowers to repay their loans. Tak fuji is being sued by a group of lawyers wl accuse the company of overstepping cred collection rules by doing such things as as ing relatives of borrowers to pay. Takefi strongly disputes these accusations.

With personal consumption rising several other Asian countries that mig be able to make use of Takefuji's libe lending approach, his choice to st within Japan appears questionable. B Takei says he isn't comfortable abroad.

Now he is left to turn down pre ously acceptable loan applicants even others expand. The same instincts th have led his company through nearly fc decades of steady growth and have c ated an industry remain Takefuji's o compass in a rough environment. Tou as times are in the Takei kingdom, ho ever, the barbarians at the gate should n count on an easy victory.

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# Disney *The Sequel*

**Under fire for a year, Michael Eisner plots a surprise comeback at the Magic Kingdom—and prepares to hand it over eventually to his heir, Robert Iger, despite widespread doubts in Hollywood.**

**By Brett Pulley**

IT'S GAME 5 OF THE 2002 WORLD SERIES AND the visiting Anaheim Angels look doomed: top of the eighth, one out and trailing the San Francisco Giants by eight runs. The beer has set in, and Giants fans begin razzing Michael Eisner, chief executive of the Walt Disney Co., which owns the Angels. In a crude reference to the Angels' lucky charm, the "rally monkey," one fan shouts an obscenity at Eisner. Exiting early to beat the traffic and escape the building hysteria, he walks swiftly through the stadium tunnel, where another fan yells: "Go back to Anaheim!"

Outside the ballpark, the Disney chief seems beleaguered yet irrationally optimistic. "We've got a man on and five outs to go," he tells a group of friends. "It's been done before. It's not over yet." The Angels lost that night but went on to defy the odds and win the Series in seven games. It was just the kind of dramatic comeback that Eisner is trying to script for himself and the entire Disney company.

Rarely in the 18 years he has reigned over the Magic Kingdom has Eisner taken so much abuse. And never has he been what he is right now: the underdog. Once the invincible titan of Hollywood, Disney has struggled in recent years with a merger hangover at ABC and problems in myriad other businesses. Its annual sales of $25 billion are up only 10% since 1998. Its stock languishes below $20, down almost 60% from an alltime high two years ago; Viacom is down a mere 17% in the same period.

Disney's total market value is now all of $38 billion—never mind that Disney's ESPN sports channel alone is worth a hefty $20 billion; the other parts would bring in perhaps $50 billion if chopped up and sold. Disney's theme parks and resorts are struggling, battered by the weak economy and fears of terrorism. In the fiscal year ended Sept. 30, attendance fell and the unit's operating income dropped 26%, to $1.2 billion. And the ABC network, which in 2000 earned $500 million in profits, lost $500 million this year.

Eisner's once-sterling reputation has taken a battering in the media. His fellow moguls have made sport of criticizing him (mostly behind his back, of course) for a host of misdeeds, from micromanaging to scaring off successors to wielding too much control over Disney's board. "Some of the criticism comes from things that are valid and within our control," Eisner concedes in an exclusive interview at Disney's base in Burbank, Calif.

Most other chief executives would have been axed by now. But this is Michael Dammann Eisner, the former Paramount Pictures wunderkind who took the top job at Disney in 1984 and awakened a sleeping giant. He exploited dusty gems like *Fantasia* and

JOE PUGLIESE FOR FORBES

e Suit and the Mogul:
er and Eisner are in constant touch.

*101 Dalmatians* and built new franchises à la *Beauty and the Beast* and *The Lion King*. Along the way, $10,000 invested in Disney stock when he took over was worth almost $410,000 by the peak in 2000, triple the rise in Standard & Poor's index of 500 stocks. Even after Disney's tumble, that initial $10,000 is at more than $176,000 today—a 17.1% annual return for 18 years, versus 12.6% for the S&P.

Thus Eisner has earned a generous amount of time to fix Disney's shortcomings. But time may be running out. Board members representing the family of founder Walt Disney are signaling that they are losing patience. Eisner must restore Disney's magic, and soon, to avoid an ugly end to a brilliant career. He also must clinch his plan to name his own successor, rather than have that right snatched away by a disenchanted board. For the first time Eisner, who is 60 and has four more years left on his contract, is making it clear that he wants to hand the keys to the kingdom to his 51-year-old sidekick, President and Chief Operating Officer Robert Iger—a well-liked manager dismissed by some in Hollywood as a corporate suit. Iger, in turn, may not ascend unless he can revive an ailing ABC. For both men, it is do-or-die time.

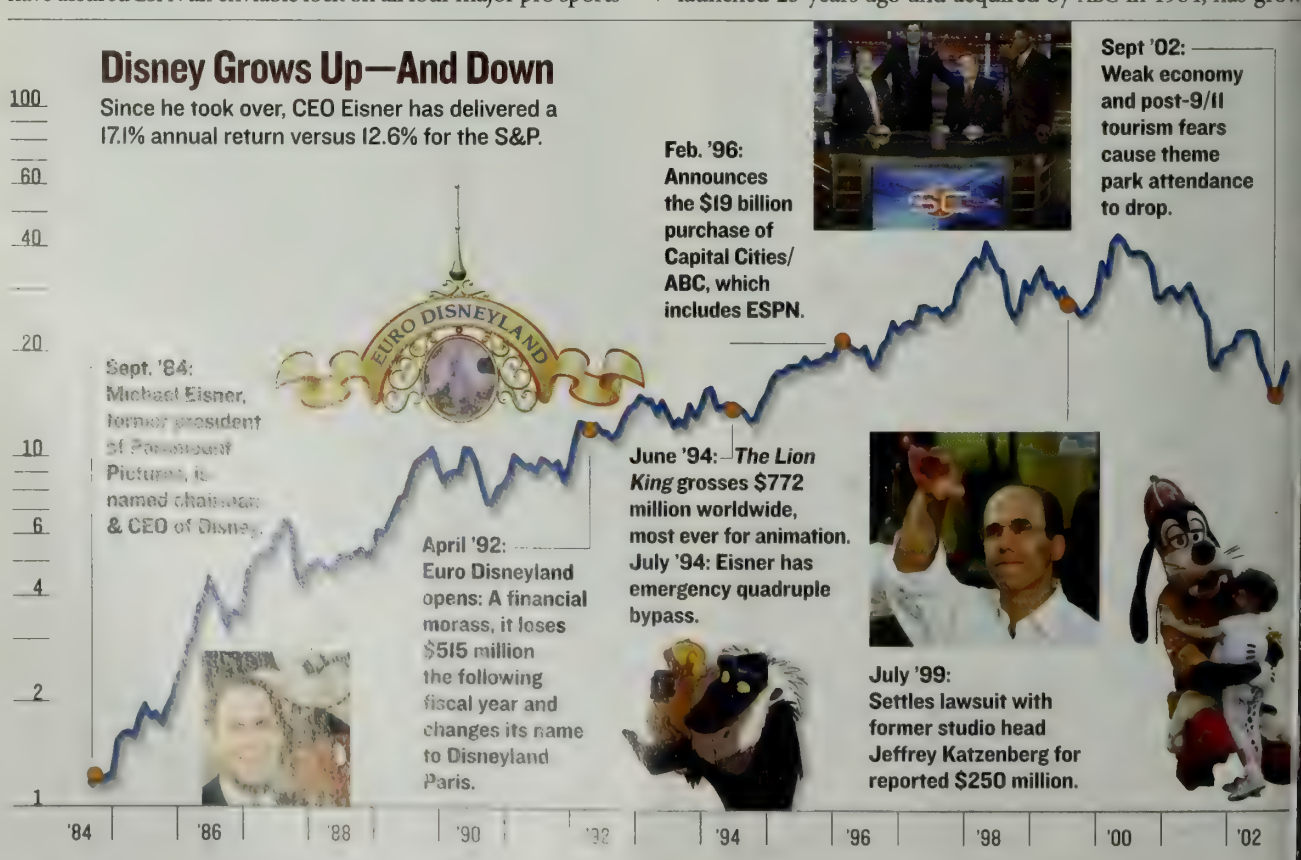
As dire as it all sounds, Eisner & Iger say they have put the pieces in place for a blockbuster comeback. "I've never felt more comfortable about our position," Eisner says. "Even though we've had some problems, we are a company that has great assets, and we're here for the long run." Iger adds: "We are well positioned. There are no big holes in the company."

Counterpunching off the ropes, the two execs have invested $5 billion in recent years to spruce up Disney theme parks and resorts, which could pay off handsomely once tourism rebounds. They have assured ESPN an enviable lock on all four major pro sports—football, baseball, basketball and hockey—for five years. On the big screen, Disney is reaping a tidy profit on cheaper box office hits such as *Sweet Home Alabama* (which cost $35 million to make and has taken in $120 million in U.S. ticket sales), defying Hollywood's penchant for $100 million gambles. And rather than wait for hit films to inspire toy spinoffs and the like, Disney now draws on a horizontal array of properties to build new billion-dollar consumer businesses overnight. Some of the most promising ideas come from a stable of cable outlets including the Disney Channel, Lifetime, Soapnet and ABC Family (formerly the Fox Family channel, which was acquired for $5.3 billion from News Corp. and Haim Saban in 2001).

To fund these moves, Eisner & Iger are embarking on a garage sale, aiming to raise $4 billion or more by peddling 6 radio stations, the Mighty Ducks hockey team and other ancillary businesses. They want to whack a substantial portion off of Disney's net debt of $13 billion over the next 18 months.

Their most urgent problem, ABC, already shows early signs of a rebound *(see box, p. 116)*. In the new fall TV season, the network has improved its ratings six nights of the week, coming in at least number two in adults 18 to 49, advertisers' most coveted group, on every night but Thursdays, which NBC has dominated for years. On Tuesdays ABC has moved from number four to number one among adults age 18 to 49, drawing 24% more of them thanks to new hits like *8 Simple Rules for Dating My Teenage Daughter,* with veteran sitcom screwball John Ritter.

One major key to salvation for Eisner & Iger is Disney's ESPN properties. In fact, Eisner says the entire company is "built on two brands—Disney and ESPN." The all-sports cable operation launched 23 years ago and acquired by ABC in 1984, has grown



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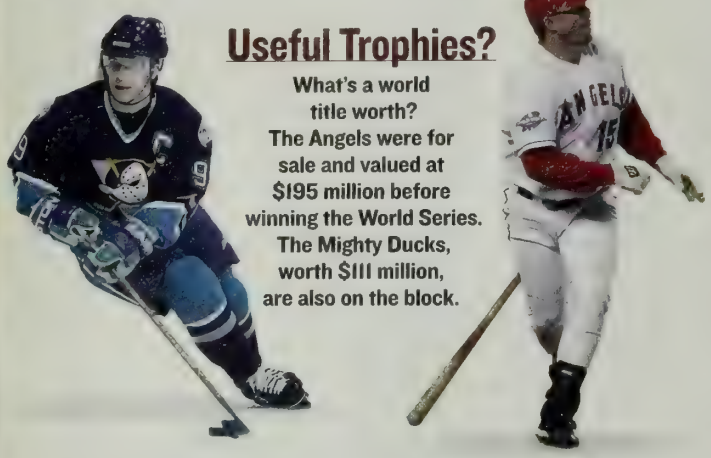
into a sports junkie's dream, with over 40 branded businesses, including seven domestic cable networks, book publishing, a radio network, a successful magazine and themed restaurants.

Run far from Hollywood in a bucolic Connecticut town of rolling hillsides and white church steeples, ESPN churns out about $1 billion in annual operating income (in the sense of earnings before interest, taxes and other items). Its primary U.S. cable channel reaches 87 million households and—all by itself—is worth $20 billion. That is just a bit more than the $19 billion



## Useful Trophies?

**What's a world title worth? The Angels were for sale and valued at $195 million before winning the World Series. The Mighty Ducks, worth $111 million, are also on the block.**

that Disney spent in 1995 when it acquired ESPN's parent, Capital Cities/ABC, grabbing the ABC network, one of the best-run TV station groups in the business, and stakes in Lifetime and a few other cable channels in the bargain. Disney owns 80% of ESPN; Hearst Corp. holds a 20% stake.

The ESPN channel's $20 billion price tag, moreover, is a conservative estimate (from Kagan World Media) based on a relatively modest 18 times the channel's annual cash flow. It could be worth even more: NBC recently paid 22 times cash flow to buy Cablevision's Bravo channel, and Viacom last paid a multiple of 22 for Black Entertainment Television.

The sports network's value is likely to grow. "Disney is investing heavily in ESPN," says ESPN President George Bodenheimer. ESPN recently became the first network ever to si multaneously lock up rights to games from all four majo professional sports. Disney paid dearly for that distinction, a it is expected to spend about $12 billion over the next six years or all of its sports programming. But with ESPN's muscle to raise th monthly fees it charges cable systems and amortize the huge cos across multiple outlets, it should prove to be worth the high price

As Eisner tries to repair ailing operations and find new growth he also fights the widely held perception that he has no successio plan in place. Not so, he insists. In an interview, he reveals for th first time that he has even written a letter to the Disney board, rec ommending a successor should some bad fate befall Eisner himself He implies it is Bob Iger, and others in the know confirm this "There's a letter from me on what I think they should do," Eisne says. "I would hope that they would pick the obvious choice."

But few people in Hollywood believe Iger will succee Michael Eisner—a not-so-subtle slight to both men. The think ing in Tinseltown is that Eisner is losing the juice to anoint hi own pick and that Iger can't live up to the billing. In any othe industry, no one would refute the likelihood of such an orderl succession. But in snarky Hollywood, Iger has the misfortune c toiling in the shadow of an executive idol. Where Eisner i viewed as a shark—creative, cunning and controlling—Iger is likeable doer: decisive and diplomatic. He is a manager, not mogul. "Bob is a nice guy," says one top film producer, "but n one in town believes he will get the job."

The succession question has bedeviled Eisner since the sudde death of Disney president Frank Wells in 1994 and Eisner's ow quadruple-bypass surgery a few months later. The issue grew mo urgent that year with the resignation of studio boss Jeffrey Katzer berg (whose subsequent feud with Eisner later spilled into cou in 1999) followed in 1995 by the ill-fated hiring—and firing ju 15 months later—of powerful talent agent Michael Ovitz.

Now Eisner clearly is grooming Iger for the top job. In wh they describe as a "senior partner-junior partner" relationshi the two divide responsibility for the various operations; Ig oversees ABC, the cable channels and ESPN. But Eisner makes point of involving Iger in areas that had solely belonged to th

## From High Atop Big Thunder Mountain . . . *Eisner Speaks!*

*On Discontent on Disney's Board:* "When we were doing nothing but going up, everybody was extremely pleased with everything. The last three or four years, when we've been more flat, the board has been brought in to address some things.... I don't think this is an issue about our board. I think it's about performance."

*On Retirement:* "I love coming to work. I love being involved in the creative process.... To me, and maybe it's just the way I am, I feel as though I just started yesterday.... I don't feel like somebody who should go play golf, or go around the world on a cruise. I can't see anything less interesting for me. And the biggest nightmare for my family would be if I had free time to meddle with my children's lives. They want me to stay here."

*On His Team:* "I think that the company has a fantastic president and chief operating officer.... I think the choice of Bob [Iger] as president is one that I reconfirm in my mind on a daily basis.... If you take me out of the company, it's not going to stop for one beat, because this company is built on synergy. This company is built on working together."

*On Turnover:* "Most people don't want to leave Disney unless they get offered something that is extraordinarily good or better than they can foresee happening here. And I have rarely met someone who we wanted to bring into Disney who did not want to come."

*On Maintaining a Creative Edge:* "You don't want to become too entrenched. You don't want to become too Hollywood, too New York. You don't want to become too domestic. You want to stay relevant. You don't want to become one of those old farts you criticize." —*B.P.*

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## Disney Divided

**Though its market cap is $38 billion, the pieces are worth far more—over $60 billion.**

**ESPN/Disney Channel and other cable outlets**
**$1.1 bil** (operating income)
**38%** (% of total)
**$26 bil** (breakup value)

**TV and Radio Stations**
**$600 mil** (operating income)
**19%** (% of total)
**$10 bil** (breakup value)

**Theme Parks**
**$1.2 bil** (operating income post-9/11)
**38%** (% of total)
**$19 bil** (breakup value)

**Movie Studios**
**$350 mil** (operating income)
**11%** (% of total)
**$7 bil** (breakup value)

**Consumer Products**
**$400 mil** (operating income)
**13%** (% of total)
**$4.5 bil** (breakup value)

**ABC Network**
**-$500 mil** (operating income)
**$3 bil** [illegible]

Disney chairman, such as film and theme-park development "He brings me into those creative meetings because it's very important for me to develop that eye," Iger says.

The two men are in close contact. In his New York office on a recent afternoon, Iger counts a dozen e-mails he sent to Eisner out on the West Coast that day. Eisner had sent six e-mails to Iger and they had talked on the telephone twice. "The business units have a very good understanding of this relationship," Iger says. "If the head of ESPN tells me something, he doesn't have to tell both of us. He knows it will get back to Michael."

While Eisner has been a pillar of Hollywood for more than two decades, Iger is the one with more Hollywood flair. Eisner drives a yellow Volkswagen Beetle. Iger drives a Porsche. Eisner and his wife have been married for 35 years. Iger's third wife is stunning CNN anchor Willow Bay. Iger wears expensive sweaters and well-tailored suits, shunning the cheesy Mickey Mouse neckties long favored by Eisner. In meetings Iger is candid, decisive and witty: While reviewing ABC's schedule in a recent meeting, he learns that the network's star anchor, Diane Sawyer, has bagged an exclusive interview with actress and singer Jennifer Lopez, who will use the appearance to break the news of her engagement to actor Ben Affleck. Sensing opportunity, Iger quips: "Will the two of them do a sitcom for us?"

At another meeting to discuss design plans for building a ship to add to Disney's successful cruise business, both Eisner & Iger are present, though this area had always been Eisner's domain. They try to assess the costs and whether to proceed. The last ship cost $350 million. "Is this going to be like the sequel to a movie, where the first movie cost $30 million and the next one costs $130 million because we tweak a few things?" Eisner asks, half-jokingly. Playing the straight man, Iger asks the ship's designers to explain why the new ship will need six engines; the last one had only five. After a lengthy answer, Eisner responds, "You know what? This is *exactly* like the sequel thing." The room crackles with laughter.

The two Disney chiefs are optimistic that they are close to striking gold in much the same way Eisner and the late Frank Wells did during their early days at Disney—by digging deep inside the company's trove of world-class assets. The head of the company's consumer products unit, Andrew Mooney, who joined Disney two years ago to rebuild the faltering business, recently created a new line of toys and clothing called "Princesses" by drawing from heroines of six Disney cartoons, such as Belle from *Beauty and the Beast*, Ariel from *The Little Mermaid* and Jasmine from *Aladdin*. The line debuted in 2000 and hit $10 million in its first year; sales soared to $700 million in fiscal year 2002, with 40% of that going to Disney.

In the past such efforts emanated from the film studio, making the company totally dependent on the whims of the box office. An animated film would be developed, and if it looked like a hit, the consumer-products division would come in and create a line. Then, if the movie had a strong run in theaters, the company might do a TV series for the Disney Channel or a straight-to-video sequel. And if it all had enduring appeal, a theme-park attraction could be built. "The focus was only on brand-new films," says Iger.

But with powerful brands, Disney no longer needs to depend

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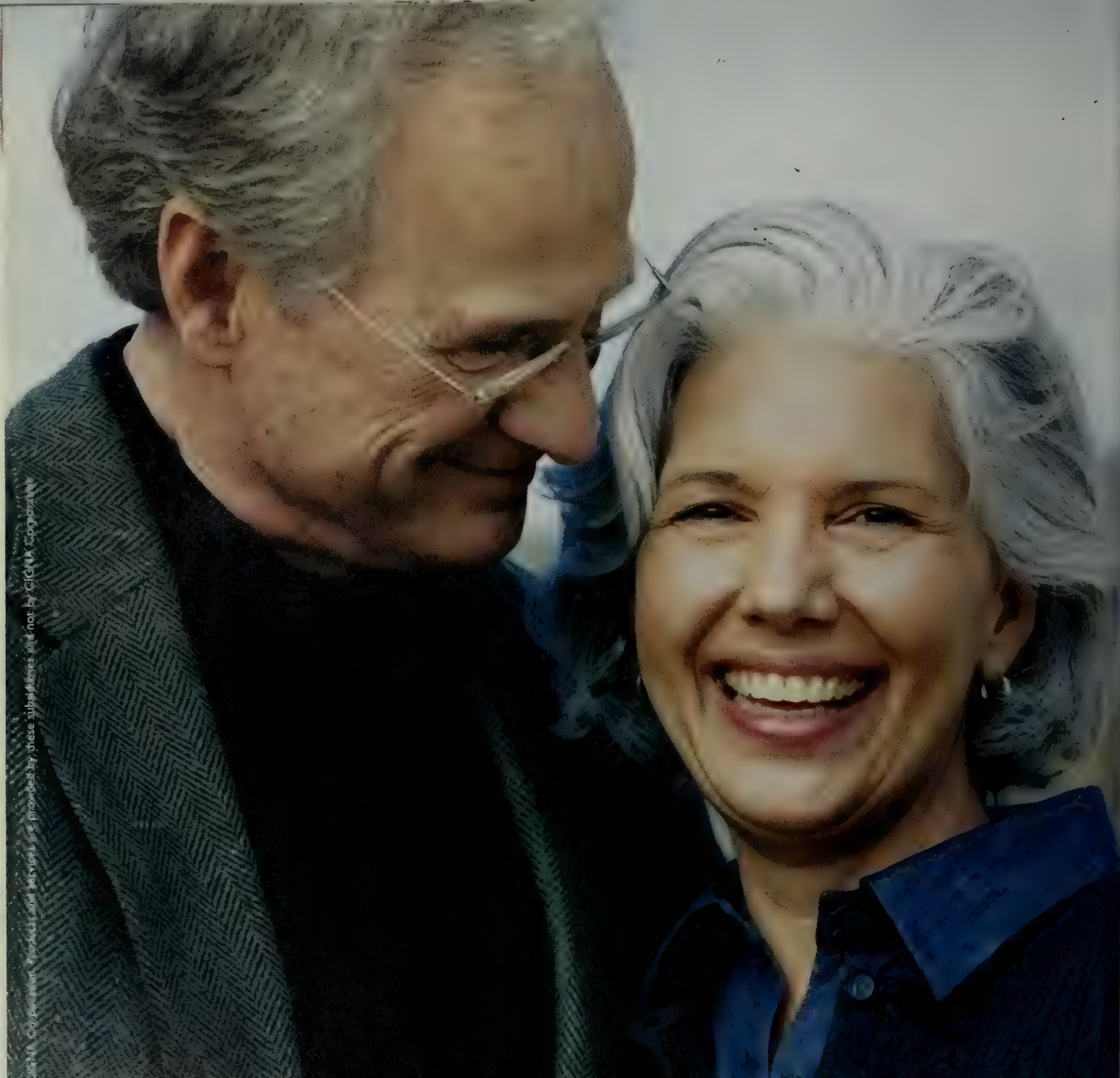


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n the studio to create franchises. Instead, Eisner & Iger ook to develop businesses horizontally across the company nd launch franchises from new directions. The consumer-roducts unit has only a 3% share of the toy market, leaving lenty of room to expand the new Princess line. It is working on product line for boys, created from non-Disney characters that ame along with the 2001 acquisition of the Fox Family Chan-el. Consumer products generated $400 million in operating ncome for each of the last two years, but still below the $511 illion in operating profits generated in 1995, thanks mostly to e blockbuster *The Lion King*.

But *The Lion King* was the most successful cartoon flick of all me. Since then the genre has expanded, giving Disney stiff com-

As ESPN president, George Bodenheimer controls a major key to Disney's salvation.

tition, especially from Jeff Katzenberg at DreamWorks. With the arket so jammed, the life span for related products is much shorter.

To counter the cartoon crowd, Disney is now beginning to e its stable of cable channels to create new franchises. The Dis-y Channel last year developed *Lizzie McGuire*, a TV show that mbines animation and live action and aims at so-called weens," kids ages 9 to 14. The show has helped the channel in audience share from rivals like Viacom's Nickelodeon, and has also led to a line of clothing and accessories for girls sold at mited Too stores. Additionally, Disney has released a *Lizzie cGuire* compact disc of songs and Lizzie books, and a feature m is being shot that is slated for release next spring. "Our cable ands are a powerhouse for the entire company," says Anne veeney, Disney's cable chief.

At Disney's theme parks, Eisner & Iger have been besieged a string of challenges in the past two years. For the first time, iticism of the parks' quality was starting to bubble up. At an av-age daily admission of $50, they had become too expensive for nsumers. New rides and attractions were needed. And the rks' signature pristine appearance was slipping a bit. As part of its effort to contain admission prices and freshen up all of the parks, which total ten worldwide and account for $1.2 billion in operating income (41% of the total), Disney now searches for ways to develop big-ticket attractions at a lower cost. Big thrill rides, the ones that scare people half to death, now have the same benchmark as blockbuster films: $100 million and up.

To build new parks and update existing ones, Disney spent about $5 billion in capital expenditures in the past five years. The timing was bad, however, and the return has been weak. The company's new California Adventure, which sits adjacent to the original Disneyland built in Anaheim 47 years ago, was built during the economic boom but opened for business in February 2001, just as tourism nose-dived.

But all of that spending has positioned the parks for growth once the uncertainty of world events recedes, predicts James Rasulo, a Disney veteran who was recently tapped to head the theme parks division. (His predecessor, Paul Pressler, quit in September to run Gap Inc.) "When things turn, as they inevitably will, our product will be fresh and relevant," Rasulo says. Disney plans a marketing blitz for early next year to try to jump-start attendance at some parks, and in January the company breaks ground on a new park in Hong Kong. It is also looking to build a theme park in Shanghai.

With big media conglomerates out of favor, Eisner isn't eyeing any big acquisitions, although if a smaller property like Metro-Goldwyn-Mayer, with its library of 4,000 films, could be bought on the cheap, Eisner would likely jump at it. To be ready, he is stabilizing Disney's balance sheet. After recent downgrades on its debt, Disney expects to pay down some of that $13 billion in net debt (after subtracting cash on hand) in the next 18 months, according to Chief Financial Officer Thomas Staggs. It also has plenty of untapped credit: At the end of June, Disney had a credit line of $4.5 billion.

Eisner also may dump ABC's 64 radio stations (18 are in the top 20 markets), which could sell for about $4 billion. "Buyers are pounding on the door," asserts one Disney executive. Also up for grabs: the Mighty Ducks and the Anaheim Angels. Disney bought the teams in the mid-Nineties as part of an effort to revitalize the home city of the first Disneyland; that job done, it views the teams as disposable. That was before the Angels won the World Series and showed the goodwill a champion musters. At Game 5 in San Francisco Eisner hosted a strategic guest: Apple Computer cofounder Steve Jobs, who also controls Pixar, the animation company that created the Disney hit *Toy Story*. Disney's exclusive deal with Pixar is up for renewal next year. And Eisner wistfully recalls walking onto the field after the Game 7 victory: "I hear the beginning of boos," he says, "and then I mention how great it is that we won," and the crowd starts to cheer—a rarity for Eisner these days. Suddenly, "it was like I was allowed to be there." Right now Michael Eisner—mogul, chief Mouseketeer, unlikely underdog—has his ear to the ground, listening for the crowd to cheer once more. F

# Network Reworked

Executives are walking on eggshells these days at the new Burbank, Calif. headquarters of ABC Entertainment. They dare not admit to the biggest surprise of the new television season, lest they jinx it: ABC is making a comeback.

Last year the best that ABC could manage among the age 18-49 viewers most sought by advertisers was a second-place ranking on a few nights of the week. As the new fall schedule unfolded, predictions in the TV biz were unanimous: Many seasons would pass before ABC could rebound.

Yet ABC now runs number one or two six nights a week, buoyed by a strong lineup of sitcoms such as the new *Life With Bonnie*, and by a hit in the interminable reality genre, *The Bachelor*. On Tuesdays last year ABC placed a dismal fourth with 4.7 million viewers ages 18-49; it now places first, and the audience is up almost 30%, to 6 million. Season to date overall, ABC's 18-49 audience is up 8%, from 4.6 million nightly viewers a year ago to 4.9 million.

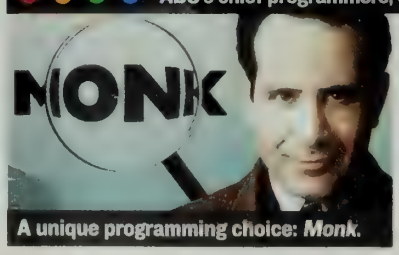
"Clearly our performance is starting to be a surprise," says ABC Entertainment Chairman Lloyd Braun. But he warns that the season is only two months old. "We aren't raising the banners to celebrate just yet."

Even a mild turnaround at ABC could juice up Disney's entire bottom line. ABC earned $500 million in operating income in 2000 by overdosing on *Who Wants to Be a Millionaire*, the Regis Philbin game show that provided two-thirds of the profit. By fiscal 2002 ABC ran a $500 million operating loss. If ABC could just break even, it would add 23% to the $1.3 billion profit Disney posted for the year ended Sept. 30.

"So far this season, we are very happy," Disney Chairman Michael Eisner says cautiously. But ABC batted 0 for 3 on new dramas this fall, with the most abysmal ratings coming from the sinewy *Push, Nevada*, which drew just 3.9 million viewers overall before it was canceled. And Thursday nights, which NBC has ruled for years, continue to drag down ABC's overall performance. Chief network programmer Susan Lyne sees a benefit in having to build ABC's schedule from scratch. "We have the chance to really put our stamp on what ABC will look like," she says.

Now ABC does things that were unimaginable a few years ago.

ABC's chief programmers, Susan Lyne and Lloyd Braun, have started from scratch.




A unique programming choice: *Monk*.

The network is in talks to merge its venerable new division with AOL Time Warner's CNN, which cou save a reported $200 million a year. In prime tim ABC now airs a funny drama—*Monk*, kind of *Columbo* with OCD (obsessive-compulsive disc der)—a few nights after the same episode debuts a much smaller audience on the USA cable chann The show was developed by Disney's Touchstone studio, and A pays USA Network a fee of $400,000 for two runs, far less th the $1 million-plus cost for a first-run drama.

ABC also has begun signing long-term license deals for n shows, setting per-episode fees that extend over seven or eig years, double the industry norm. This could let ABC avoid t free-agency madness that NBC faced on hit shows like *Frien* (and is about to endure with the White House hit, *The W Wing*). The contract for the six stars of *Friends* was renewed 2000, reportedly paying each of them a jolting $750,000 p episode, a sixfold increase over their previous salary. NBC's h pital drama *ER* reportedly landed an unprecedented $13 milli per episode in 1998. Such hyperinflation is a problem only wh shows are a long-term hit—and that's a challenge the wary fo at ABC are eager to face. —E

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# A Few Good Toys

## The U.S. Army has some imaginative ways to annihilate the Saddams of the future.

BY DYAN MACHAN

AS THE U.S. ARMY PREPARES FOR WAR IN IRAQ (AND BEYOND), IT HAS been moving fast to transform itself from a Cold War relic into a deadly, rapidly deployable force. The last two major U.S. conflicts, Desert Storm and Kosovo, were largely won by the U.S. Air Force before the Army's lumbering tanks ever got there. The Army used to be a sledgehammer; now it needs to be a cordless drill.

Technology will play a big role in this evolution, and that is the purview of A. Michael Andrews, the Army's 56-year-old deputy assistant secretary for research and technology. Andrews, a civilian electrical engineer with the rank of a two-star general, oversees 21 labs, 8,600 scientists and engineers and a $1.5 billion-a-year budget. "We explore the realm of what's possible," says Andrews, who was recruited by the Defense Department after 25 years at Rockwell International. He holds five patents in infrared technology, one of which is the basis for the guidance system on the Army's Javelin shoulder-fired antitank missile.

Andrews gets his inspiration from science fiction like *Star Trek* and the books of Arthur C. Clarke, as well as nonfiction like *Black Hawk Down*, the retelling of U.S. Special Operations Forces' bloody, chaotic street fight in Mogadishu, Somalia in 1993. That book (and later movie) exposed a weakness: Soldiers had to make too many decisions about what they needed in battle and ended up going in unprepared. To correct this, Andrews is eliminating choices by incorporating drinking water, body armor and other features in the uniform of the future.

What worries Andrews most is finding a way to toughen up battlefield data networks. Platoons will be busy monitoring video feeds from their falcon-size unmanned spy drones and receiving biohazard detection data from robotic scouts, all while screaming at one another over a headset. Each soldier may need to consume as much as 5 to 6 megabits per second, a hundred times the speed of a residential dial-up Internet connection. Add in smart weapons talking to satellites and armored personnel carriers talking to one another, and the modern-day battlefield becomes a telecom mob scene.

"Everything relies on a reliable and secure network," says Andrews. "Without it, our vulnerability is exposed." Dreaming the possible is one thing. Making it work is quite another.

MINIBAR-SIZE ROBOTIC "MULE" FOLLOWS SOLDIER WITH 40 TO 50 POUNDS OF IMPORTANT GEAR.

ILLUSTRATIONS BY SLIMFILMS FOR FORBES

# Soldier Of Tomorrow

THE ARMY'S GOAL IS TO come up with a uniform by 2008 that will make a soldier better than all that he can be. Helmets will enhance hearing and protect ears from battle cacaphony. Head's-up displays built into the visor will display infrared images to reveal friend from foe on the battlefield. To cut the weight soldiers must carry down from the current 100 lbs. to perhaps 40 lbs., the Army is developing a wheeled robot "mule" that follows a soldier around with equipment for purifying water and recharging batteries. Further out, the Army warfighter of 2025 will be a a machine-assisted soldier as deadly and effective as a 1990s-era tank. Lightweight body armor will use plastics made with nanomaterials to deflect a bullet with an electrical charge. Polymers in the uniform will "read" their wearer's surroundings and change color and pattern to render him nearly invisible. Boots may contain a liquid that hardens if the solider steps on a land mine. Coin-size silicon microturbines will power the soldiers' computer systems.

## Force Field

THE ARMY IS GETTING READY TO TEST AN armored vehicle that can thwart rocket-propelled grenades by sending out an electronic counterpunch that creates a false target in front of the vehicle. How it works the Army won't say exactly. The first design is slated for next spring. The technology will be effective at intercepting grenades moving up to 475 feet per second and may be deployable by 2008. It isn't quite the protective energy-bubble enshrouding the *Starship Enterprise*, but we're getting there. Also under development for 2008: electromagnetic-pulse weapons mounted on tanks or drones to deliver a charge of energy that would fry enemy electronics, turning an unprotected fighter jet into a flying brick.

## Show Time

A YOUNG RECRUIT STANDS BEFORE A 150-DEGREE WRAPAROUND MOVIE SCREEN, STUDYING A MILITARY DRAMA CREATED BY computer-graphics artists. More than 3,500 watts of sound thunder from 13 speakers throughout the room. He sees onscreen that his unit's Humvee has just struck a car carrying a civilian boy who will die unless he gets to a hospital—fast. Meanwhile a news crew is videotaping the action from the side. The officer calls for a medevac, but a nearby outpost radios that it's taking fire and needs backup. When the recruit heads for the field, abandoning the child, the mother goes ballistic as the news cameras roll. "This is crisis decision making," says Richard Lindheim, executive director of the Institute for Creative Technologies in Marina del Rey, Calif. The Army granted the institute an initial $45 million a year to create simulations using Hollywood talent. Lindheim says one colonel who tried it said it was too close to what he had experienced in Kosovo; the officer had to leave the room. An upgraded version is due out next year.

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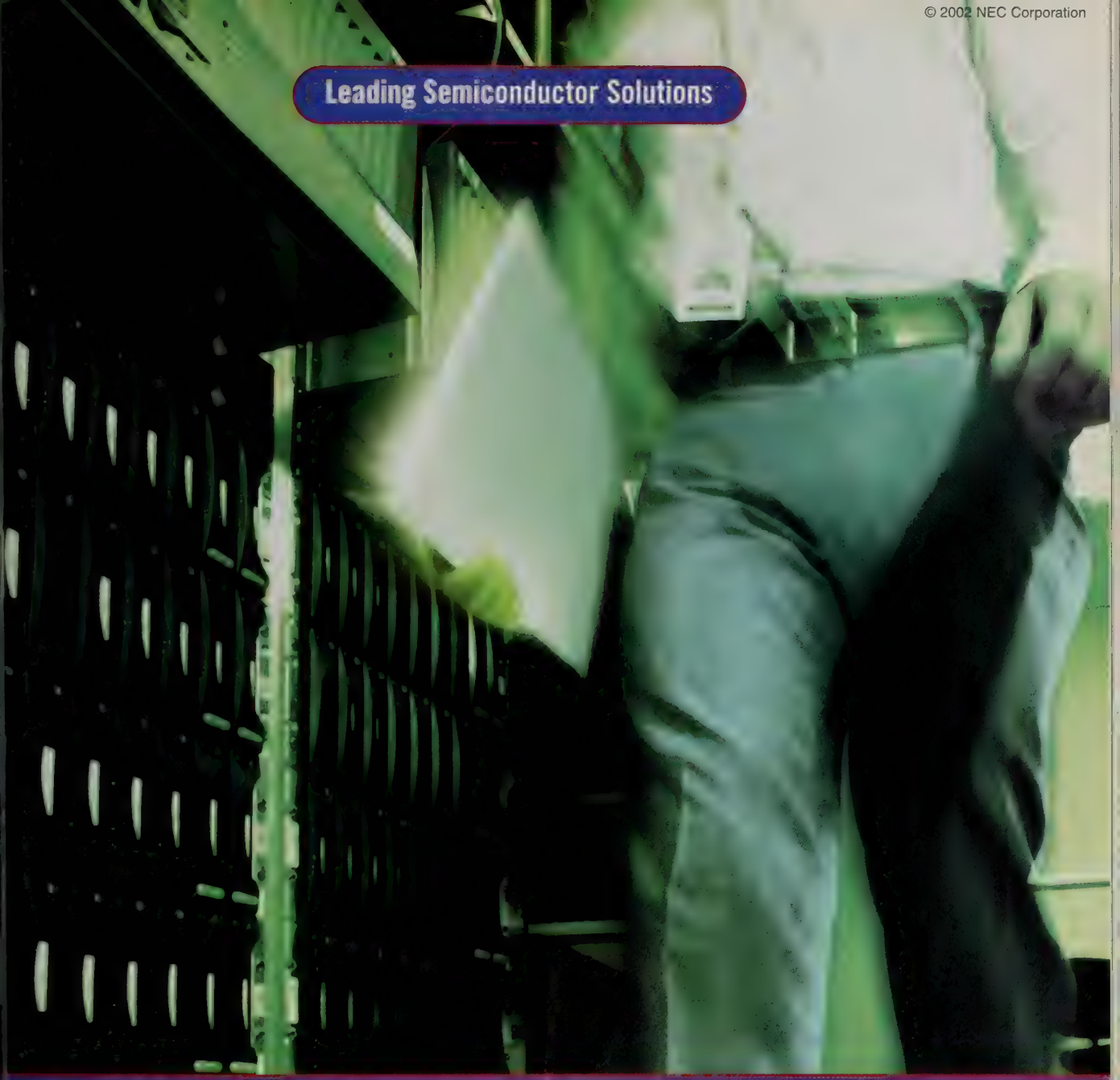


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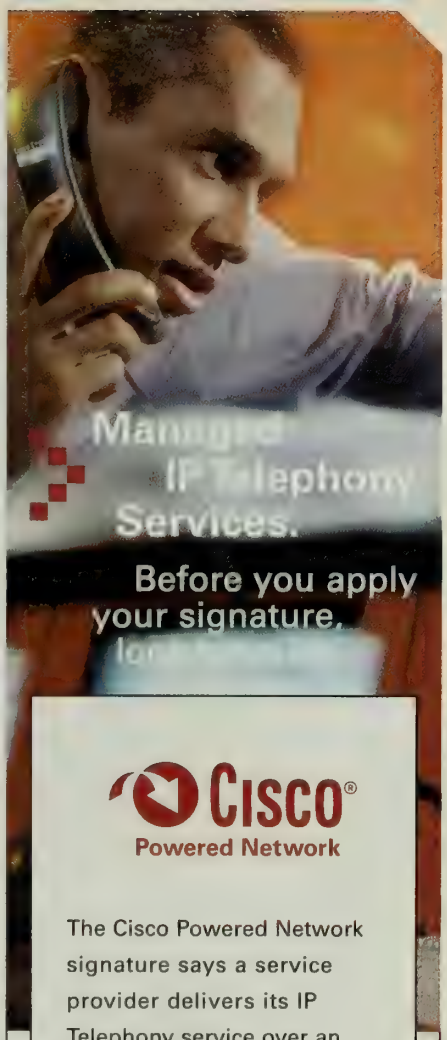
# Attack of the Drones

SERGEANT, WE'VE SHRUNK THE SPY PLANE: THE PREDATOR, THE UNMANNED airplane that incinerated a carload of al Qaeda suspects in Yemen last month, is on its way to becoming the size of a sparrow. Each soldier will use his own tiny drone, flying it around a corner to beam back video images into his helmet display screen. Six-inch winged versions under a soldier's control are in development for 2008; future versions will fly themselves via delicate image sensors and global positioning system data. Commercial uses: Farmers could send out a flock of drones to monitor crops; border control would be less labor intensive; and companies could fly the robo-critters over cubicles to make sure employees aren't slacking off. F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# Shooting Stars

LIKE VIRTUALLY EVERYTHING ELSE BASED ON ONES AND zeroes, digital camcorders keep getting more like computers—except in how often they crash. Clever engineers keep cramming in features; many are dubious and most are hard to understand and use.

But digital camcorders are a real advance over their analog counterparts, if only because they make it so easy to transfer video to a computer without any loss of quality. Then you can edit the result into anything from a tiny e-mailable file to an expansive DVD. In recent tests I rediscovered that most digital camcorders cover the basics well—including autofocus, autoexposure and image stabilization. The trick is to steer clear of overengineered designs that will please geeks but befuddle you. Here are five feature-loaded (but reasonably priced) models I tested, in order of personal preference:

**New features keep dazzling in digital camcorders. But watch out for overengineering.**

**SONY DCR-PC101** This $1,050 model is a direct descendant of the PC5 that I raved about and bought two years ago. The compact, unobtrusive size and light weight mean you can bring the unit along without thinking twice. And the touchscreen interface, though occasionally annoying, offers a dazzling feature that took me a while to appreciate: a spot meter that lets you simply touch the item you want to emphasize, a trick that's worked for me with sunset saguaros in Tucson and midday stained glass in Chartres. This model adds a similar feature that lets you touch the item you want to be in sharpest focus. Nice.

Still troubling, though, is the top-mounted mike, which picks up more wind noise and cinematographer wheezing than might be ideal. And Sony still doesn't offer a lens hood to avoid flare when shooting into the sun.

**CANON OPTURA 200MC** Th ergonomics of this perfectly fin $1,200 device did not quit comport with my tastes. I par ticularly disliked the grain downward-angled viewfinde which made it hard for me t keep the camera level, and th top-mounted mike was no be ter than the Sony's. But I wa smitten with the simple switc that lets you change from ful automatic mode to customized presets instantly.

**PANASONIC PV-DC352** Unlike the first two, this full-feature $1,000 unit has the horizontal shape of a traditional camcorde which many people find easier to hold. The mike is up fro where it ought to be, and the viewfinder can be used in the ho izontal position or at a variety of angles. Like the Optura, it not much bigger or heavier than the Sony, but somehow seems that way.

**SONY DCR-IP220** The only possible explanation for this od looking $1,600 model's existence is that a few engineers we

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DIRECT REIMBURSEMENT

berserk. For openers, it's built around Sony's tiny MicroMV tape rather than the industry-standard MiniDV that the first three cameras use. Programs like Apple's iMovie and Microsoft's much-improved Windows Movie Maker can't edit its MPEG2-compressed output. And though MicroMV does some useful things like storing a thumbnail image of the start of each shot on a chip in the cassette, it also introduces an annoying delay before you can start recording and a freeze-frame effect at the end of every shot.

Sony tossed in Bluetooth wireless connectivity, along with a Web browser and e-mail software that, in theory, let you transmit images and videos. But the Bluetooth software doesn't work with computers at all. It works only with cell phones that dial a number to contact a service provider like AOL—preventing you from using most dataphones' high-speed connections. And entering an e-mail address is a frustrating bout of tapping letters and numbers on the tiny touchscreen with a stylus. Steer clear unless you're the kind of geek who considers all that a charming challenge.

**HITACHI DZ-MV270A** This $1,150 device seems so reasonable: Instead of recording on tapes, why not put the data directly on miniature DVDs? First problem: Though the hard-to-find 8-centimeter discs are roughly half the size of standard ones, the camera ends up being fairly large anyway.

Second problem: Recordable DVD media are confusing. Use mini-DVD-RAM discs, and you can take advantage of their erasability and random access, but yo can't use the disc in most standard DV players and computer drives. Record o DVD-R discs and you can't erase them ever, but you gain compatibility—pro vided that after recording each disc, yo plug the camera into an AC outlet an "finalize" the disc so that it can be rea elsewhere. Either one is a pain, and bot formats produced rather dark an unpleasant images compared with tape.

This is the only camcorder I tried th lacks a standard FireWire port. Instead includes a fast USB 2.0 connector that ca transfer the highly compressed data c these discs even to a slow old USB po Unfortunately, you can't edit the outp with most standard software, and t software and documentation that con with the unit are rudimentary.

For now, stick with MiniDV. Beyo that, such low-tech matters as how t unit fits your hand are more importa than electronics, so try before you buy.

Though many camcorders can sho stills on memory cards, most are subp at snapshots compared with all but t cheapest digital photo cameras. Extra b teries and a wide-angle conversion le are the most useful accessories.

List prices are impolite fictions. Y can find real-world prices on the Web, b be wary of unauthorized vendors w "gray market" goods. Authorized deal may not quote their best prices on t Web, but will often e-mail you bet deals or match the competition by ph before you even get down to haggling.

Forbes.com | Stephen Manes (steve@cranky.com) was cohost of *Digital Duo* and has been covering technology for nearly two decades. Visit his home page at www.forbes.com/manes.

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**Wendy Lewis, Vice President, Strategic Planning For Recruitment and Diversity Major League Baseball, Office of the Commissioner**

To strengthen the League's commitment to diversity, Baseball Commissioner Allan H. "Bud" Selig authorized the establishment of MLB's Diverse Business Partners (DBP) Program, an economically driven business initiative that focuses on supplier diversity and was established to cultivate new and existing partnerships with minority-owned and women-owned businesses. Since the formation and initial implementation stages of the DBP Program in 1998, MLB has purchased more than $260 million with minority- and women-owned businesses through direct and affiliate spending.

"Today Major League Baseball is at the forefront of providing business opportunities for minorities and women. The procurement of goods and services with our diverse business partners contributes to the growth of our game and communities. Our franchises support the commissioner's initiative and look forward to other major league sports expanding their supplier diversity efforts," says Jerry Reinsdorf, chairman of the Chicago White Sox and co-chair of the Equal Opportunity Committee for Major League Baseball.

MLB evaluates vendor relationships based on an individual vendor's ability to satisfy various objectives, including such factors as price, quality, service and the vendor's willin and ability to satisfy the various needs of MLB's Central and Clubs. The Diverse Business Partners Program he ensure that the League has access to the maximum num businesses that can satisfy its needs and encourages mi and women-owned businesses to participate in the procur process for desired goods and services.

"The Diverse Business Partners Program is an importa strategic initiative and is pursued with a commitment to lon success. It has been designed to promote efficienc profitability for MLB and its Clubs, while extending bas ability to contribute to the economic strength and well-be diverse communities," says Wendy Lewis, vice presid Strategic Planning for Recruitment and Diversity for Major L Baseball, Office of the Commissioner.

Another key development in the evolution of the D Business Partners Program is MLB's announcement individual partnership agreements with both the N Minority Supplier Development Council (NMSDC) and W Business Enterprise National Council (WBENC). Both N and WBENC recognize that these individual agreement MLB are the first of their kind with a professional sports The partnerships include memberships for the League's Office and Clubs in local chapters of both NMSDC and W

"These partnerships provide MLB with access to natio local minority- and women-owned b information, as well as compreh resources, which include seminars, and technical assistance that supp Major League Baseball's diverse procurement efforts," says Lewis.

For more information about MLB's Business Partners Program, visit the L official Web site (www.MLB.com) the Diverse Business Partnership 212-931-7554.

**Baseball Commissioner Allan H. "Bud" Selig (right) discusses the League's DBP Program with Chicago White Sox Chairman Jerry Reinsdorf and MLB's Wendy Lewis.**

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# Image Impresario

**A Madison Avenue misfit suddenly finds a choir for the comprehensive marketing tenets he has long preached. Got ATM slips? Brand those babies.** BY ALLISON FASS

WHEN PETER ARNELL MET KMART CHIEF EXECUTIVE James Adamson by chance last March, the irrepressible brand man couldn't keep from making an impromptu pitch for his marketing advisory firm in Manhattan. But he wasn't trying to win an advertising account. Kmart should overhaul its dowdy 1,800 stores, insisted, blurting out ideas for improvements as if he'd been inking of them for some time. Stores should be fresher, cleaner, brighter, Arnell breathlessly enthused, waving his arms and dropping to his knees. Adamson was amused—and sold. Didn't matter that the troubled retailer was reorganizing under Chapter 11 bankruptcy. "I met my home run," he says. "I knew we had to negotiate a contract."

Nice score for Kmart. Sales jumped more than 10% in October in the first of five Kmart stores, in Illinois and Michigan, that are being redone to specifications by Arnell Group. They feature

playful directional aisle icons; shopping carts modeled after race cars; boulevard-wide aisles; and a lime-green logo that's supposed to symbolize growth, which Kmart desperately needs.

Business is booming for Arnell. The Madison Avenue fixture has been a fringe player for 22 years. But now he is suddenly attracting a slew of mainstream marketers. In the past 18 months Arnell has picked up eight big clients, doubling his company's revenue this year to $50 million. Pretty impressive in a marketing drought that has devastated other ad shops.

Arnell's newfound popularity reflects marketers' determination to find ways other than traditional advertising to connect with consumers. Marketers are asking Arnell Group to provide a range of brand-building services, from product design to songwriting. At the moment Arnell is creating a new candy for Masterfoods USA, a division of Mars. For Gateway he is conjuring a "personality"—and look—for a new line of computers. And he's helping Bank of America figure out how to extend its brand to ATM slips and teller windows. "He tries to come up with new ways to connect with consumers," says Sergio Zyman, consultant and author of *The End of Advertising as We Know It.*

The new business is also a result of the June 2001 acquisition of his company by Omnicom Group for an undisclosed sum. The deal gave Arnell the legitimacy and the access to big companies that he has craved.

Arnell started pitching brand work beyond advertising more than a decade ago, when he made the unusual move of hiring architects and product designers to work alongside the copywriters in his little ad agency. Then-client designer Donna Karan asked Arnell to design her boutiques in 1987, but most other marketers only tapped Arnell for the oldest form of advertising: black-and-white print ads.

Even with the new product and retail design assignments he has picked up in the past 18 months, reducing advertising to just 20% of his current work, Arnell remains best known for his stylish print ads. Those for Rockport, for instance, feature photographs of bare feet, but no shoes. In his work for Samsung, buff models embrace microwave ovens and TV sets. Arnell

**Retail renaissance: Kmart tapped Arnell Group to help it create a snappy new logo and a snazzy look for its stores.**

was behind the memorable DKNY ad in the early 1990s that featured a shot of the Manhattan skyline inside the letters of the logo. The Samsung and DKNY work are well-known to Manhattanites because Arnell put gigantic versions on the sides of buildings. (His ads for RBK, Reebok's urban brand, will soon be wrapped around water towers atop buildings in Manhattan, an advertising first.) Arnell shoots the pictures for many of his agency's campaigns and signs the ads. When there are commercials, he often directs them. These are unusual practices, especially for a guy who wants to be known for more than advertising.

But it's also proof of his infamous ego and controlling personality—traits that for many years made it difficult for Arnell to land mainstream clients. Until recently most of his work was for fashion marketers, folks accustomed to overbearing creative types.

His newfound popularity isn't evidence that he's softening. What starts out as a straightforward chat in his Soho office turns into an hours-long discourse that's part lecture (on architecture), part show-and-tell (his photography), part confessional (he's trying to lose 100 pounds) and part theater (one employee poses as a kleptomaniac). Encounters are punctuated by endless phone calls—Marth Stewart's number is one more than 30 displayed on h office speed dial—and inte ruptions by staffers, includi the "kleptomaniac." The er ployees kowtow and see nervous. Six years ago four a sistants actually sued Arne alleging harassment. They se tled out of court. "When y see him—his behavior—f the first time, you wonder i relationship is going to las admits Reebok marketi chief Muktesh Pant.

Sometimes it doesr While Arnell maintain years-long alliances with se eral clients, including Don Karan and Samsung, other lationships were more fleeti Progressive Insurance and prit didn't keep their ad counts with Arnell Group for very long deal with Interpublic Group unit Dr Worldwide, which briefly owned 55% Arnell Group, fizzled after 14 months. C reason, say those in the know, was the cli churn at Arnell's shop. "You either l Peter or you hate him," says Mitchell K ner, who heads Idea Bridge, an enterta ment marketing outfit in Santa Monic

Arnell prefers to say that he's sor times "misunderstood." But enamo marketers suggest Arnell's pushines often put to good use. When execs at Chrysler unit of DaimlerChrysler deci last year that they wanted tunes from r band Aerosmith in their Dodge Ram c mercials, they were told by one ad age that the band wouldn't sell rights t music. Hearing that, Arnell picked up phone, punched one of the buttons or speed dial and reached Thomas Mot the head of Sony Music. From him A learned that Aerosmith needed a title s sor for an upcoming concert tour. In s order Aerosmith had a sponsor, Chrysler, its music.

"In the old days people always acc us of being jacks of all trades, maste none," says Arnell. "What everyone m is that's how we became masters c trades."

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**Mid-Cap Value† ★★★★**
**Spectrum Income ★★★★**
**GNMA ★★★★**

These funds were rated among the following categories for the overall rating and the 3-, 5-, and (if applicable) 10-year periods: Capital Appreciation Fund, 680, 680, 517, and 127 domestic hybrid funds; Growth Stock Fund, 758, 758, 495, and 156 large growth funds; Equity Income Fund, 631, 631, 462, and 156 large value funds; Mid-Cap Value Fund, 188, 188, and 128 mid-cap value funds; Spectrum Income Fund, 158, 158, 111, and 27 multisector bond funds; GNMA Fund, 282, 282, 247, and 101 intermediate government funds.

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**For more information, including fees, expenses, and risks, request a fund profile or prospectus: read it carefully before investing.** For updated performance information, please visit our Web site or contact a T. Rowe Price representative. *For funds with at least a 3-year history, a Morningstar Rating™ is based on a risk-adjusted return measure (including the effects of sales charges, loads, and redemption fees) with emphasis on downward variations and consistent performance. The top 10% of funds in each category receive 5 stars, the next 22.5% 4 stars, the next 35% 3 stars, the next 22.5% 2 stars, and the bottom 10% 1 star. Each share class is counted as a fraction of one fund within this scale and rated separately. The Overall Morningstar Rating™ is derived from a weighted average of the performance figures associated with a fund's 3-, 5-, and 10-year (if applicable) Morningstar Rating™ metrics. Morningstar Rating™ is for the retail share class only; other classes may have different performance characteristics. Capital Appreciation received 5 stars for the 3-, 5-, and 10-year periods. Growth Stock received 5, 4, and 5 stars for the 3-, 5-, and 10-year periods, respectively. Equity Income received 4, 5, and 5 stars for the 3-, 5-, and 10-year periods, respectively. Mid-Cap Value received 4 stars for the 3- and 5-year periods. Spectrum Income and GNMA received 4 stars for the 3-, 5-, and 10-year periods.

†-0.19%, 8.05%, and 11.40% are the Capital Appreciation Fund's, -18.63%, 0.61%, and 9.79% are the Growth Stock Fund's, -14.16%, 1.57%, and 10.30% are the Equity Income Fund's, and -0.09%, 5.20%, and 10.38% are the Mid-Cap Value Fund's average annual total returns for the 1-, 5-, and 10-year (Mid-Cap Value since inception 6/28/96) periods ended 9/30/02, respectively. These figures include changes in principal value, reinvested dividends, and capital gain distributions. Investment return and principal value will vary, and shares may be worth more or less at redemption than at original purchase.

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# THE NEXT PICTURE SHOW

**LARRY MEISTRICH'S last movie project was an expensive flop. His latest enterprise, he claims, is a result of hard lessons learned.**

BY PETER KAFKA

LARRY S. MEISTRICH HAS A NIFTY IDEA for a business: He wants to buy the rights to highbrow films that don't make it to national theater chains and sell them directly to consumers via a DVD-of-the-Month club. The business is easy to understand and doesn't require much capital. It could even turn a profit. In short, it's nothing like his last company.

Good thing. Meistrich's previous venture, Shooting Gallery, was an independent film shop turned Internet "content provider" that failed spectacularly in the spring of 2001. Investors lost tens of millions; some sued Shooting Gallery, charging fraud. Meistrich, 35, filed for Chapter 7 last year.

Meistrich says he's learned an expensive lesson. With his new Fairlawn, N.J. company, Film Movement, he'll stay focused on one idea, control costs, move slowly. But chastened? Hardly. "I'm upset people lost money," he says. "[But] I haven't found a lot of people badmouthing me. It really hasn't affected me that negatively."

Shooting Gallery started out in 1990 with modest ambitions. The plan: Raise money, make small art-house movies on the cheap, then sell distribution rights to a larger studio. His first production cost $40,000. Four years passed before he scored big with *Sling Blade*, made for $1 million and starring Billy Bob Thornton. He sold the picture, which went on to win an Oscar, to Miramax Films for $10 million.

That success made Meistrich a very visible face in New York's film scene. He relished his role, boasting of the company's swelling ambitions, which eventually expanded to include making commercials and music videos and leasing production facilities to other filmmakers. By 1998 he was touting plans to build a $100 million film studio in dilapidated Harrison, N.J.

Hollywood-near-the-Hudson never materialized, but Meistrich's plans kept growing. Shooting Gallery belatedly chased the Internet bubble, positioning itself as a "rich media" outfit and spending accordingly. General and administrative costs jumped from $5.2 million in 1999 to $21.1 million the following year; salaries climbed from $2.4 million to $12 million. As revenue increased from $21.2 million to $27.9 million, losses jumped from $23.3 million to $42 million.

None of this deterred Toronto-based Itemus—a former mining operation reborn as a penny-stock Web incubator—from agreeing to buy 80% of Shooting Gallery. It advanced $14.9 million while the deal was closing. By the time it did, in May 2001, Itemus had acquired the company for 71 million shares then valued at $32.3 million.

Soon enough Itemus announced that finances at Shooting Gallery had "deteriorated substantially." Shooting Gallery closed its doors at the end of June. Itemus filed for bankruptcy

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July 12, 2002

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nonth later, blaming Shooting Gallery's ottomless problems" for its demise and eatening legal action. Meistrich concedes overexpanded but says Itemus presented lf as "a company we thought was a lot onger than they were." He denies that ooting Gallery caused the calamity, ling, "The day that Itemus shut us down didn't need to be shut down."

Still, weeks after Shooting Gallery shut vn, former board member Peter J. Dazo, a senior managing director at Cantor gerald, sued the company and its for- president, Stephen Carlis, claiming Dazo and others were owed money from ividual films they'd invested in. They ac- ed Carlis of diverting revenues generated films into the company's other opera- ns instead of to backers. While the suit n't name Meistrich, it says he "knew or uld have known of Carlis' acts," and pre- ted them.

Carlis, who left the company in Dember 2000, settled out of court this ng. Meistrich, he now says, is "obvi- ly not someone I'm on good terms n." Says Meistrich: "I was the creative ; he was the money guy."

Shooting Gallery's implosion left plenty ggrieved creditors. Among them: Don- C. Carter, who made a fortune as a xy solicitor in the 1980s, and a fund ired by buyout king Henry Kravis. nch bank Natexis Banques Populaires a complaint against Shooting Gallery ing repayment of a $9.8 million loan. A rt-appointed receiver rustled up $1.2 ion from the wreckage, primarily from nues of Shooting Gallery's library of e 45 films. At some point, the library be sold outright. Meistrich himself filed ankruptcy last December, listing as- of $47,000 and liabilities of $2.5 mil- . Creditors are still hoping to recover e of their funds.

But by then he was also planning his comeback. Film Movement, he says, will focus solely on distribution. The plan is to pick up the North American rights to small movies that win accolades at film festivals—movies like *El Bola*, a Spanish film about child abuse that racked up awards in that country's equivalent of the Oscars—but that get passed over by large distributors. Subscribers get one feature film per month, which they keep, just like a book-of-the-month-club. He has already bought eight films and is starting to sell them via subscription, on DVD, for $20 a month, or $189 a year. (Services like Netflix and Wal-Mart.com rent mainstream titles.)

Can it work? Meistrich will cap acquisition costs per film at 10% of his monthly subscription revenue at the time he first releases the film, plus 10% of any other revenues a film generates. If, for example, he has 10,000 subscribers, he'll pay a filmmaker around $20,000 upfront, plus a cut of whatever the movie racks up in a few theaters. If the film becomes a hit down the line, the filmmaker will get another $2 to $3 for each video sold.

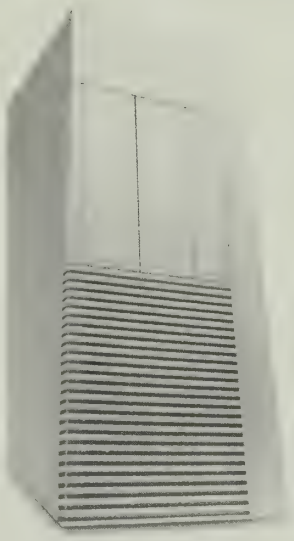
**Unfortunately, he helped perpetuate STEREOTYPES OF INDEPENDENTS being fly-by-night operations."**

Meistrich's biggest cost will be marketing, which he figures will run an average of $300,000 per film in the first year. He hopes to be able to defray some of those costs by convincing consumer marketers to help pitch in on his campaigns.

He is telling investors he can get to 50,000 subscribers by the end of next year. (Since September he's signed up 2,400 of them.) On that basis, he insists, he can pull in a gross margin (revenue minus costs of goods and royalties) of 73%. He says half of his backers, who kicked "less than $10 million" into the new company, invested with him before.

Some former associates have stayed away. "I think Larry's a good guy," says Michael Hogan, chief operating officer at Hart Sharp Entertainment, which coproduced *You Can Count on Me* with Shooting Gallery; he claims investors are still owed money for the film, which earned two Academy Award nominations. "Unfortunately, he helped perpetuate stereotypes of independent film producers being fly-by-night operations." F

"You overpriced, under-performing, no-good waste of space."



# THE DIVERSITY GAME

## Each year the government sends billions of dollars of aid to "disadvantaged" businesses. Who pockets the loot?

**BY TOMAS KELLNER**

TEAMQUALTEC IS ONE REASON THE Small Business Administration has such a bad rap. A year ago FORBES reported on how a former Pentagon secretary, Jewell Maria Whitmore, led a group that secured a ten-year, $698 million Navy contract *(Nov. 12, 2001)*. Whitmore, who is African-American, qualified for an SBA program known as Section 8(a). Created by President Nixon to foster black capitalism, the program sets aside as much as $6 billion a year of government contracts for small companies owned by people in such historically disadvantaged categories as minorities and women. But Whitmore had powerful partners who were far from disadvantaged: defense contractor Lockheed Martin, software giant Intergraph and a consultancy called CCI, which qualified because its founder was born and raised in Chile (he got his B.A. and M.A. in political science from U.S. institutions).

We surmised a year ago that Whitmore was just a front for the largest contract ever awarded under the 8(a) program, a way for not-so-disadvantaged partners to dine at the federal trough. She had little training for the work—a massive effort to create a computerized catalog of fighter jet parts and blueprints for the Naval Air Systems Command (Navair)—and, by her own admission, had no idea of who was working on the contract or how much had been done. Whitmore did, however, have an in with a former procurements guy at the Pentagon: Lawrence (Buzz) Milan, Navair's onetime deputy assistant commander for logistics, for whom she once worked.

How have things worked out? According to a former core employee, Whitmore has never satisfied the government's requirement that at least 50% of the work be done by minority partners. A Navair contracting officer complained that work by a large subcontractor has been "unsatisfactory," noting that "qualified personnel were not provided," and that deliveries were late and contained "numerous errors." Still, the government has handed out about $25 million in total orders to the venture.

Whitmore still answers the phone at her office in Beltsville, Md. But it turns out that she has been working all along as an independent beauty consultant with the cosmetics chain Mary Kay, seen selling lipstick in an Arlington, Va. hotel lobby. (A Mary Kay spokeswoman confirms that Whitmore has been with the company since 1993, and is in "active status"; she placed her last merchandise order on Oct. 31.) Can she perform two jobs at once? "I'm not interested in talking to you," Whitmore says through her assistant. (Her lawyer, Antonio Franco, first denied that she worked for Mary Kay, but later said he thought she had been in their employ since 1970.)

Payroll documents suggest she has bee busy at TeamQualtec—stacking the com pany with her relatives, at least. When o ders slowed down in March, TeamQualte laid off 90 workers who had been loadir technical data into computers. Among tl survivors: Whitmore's two sisters, moth and two other relatives still answer phon and staff her small office. This spring sl hired her husband, Stanley, and anoth relative to input data for $34,000 a year.

Some of Whitmore's partners ha made out well. In September CCI found Paul Chase, a strapping 6-footer with lig brown hair and blue eyes, sold his com pany to Stanley Associates, a large feder contractor with $110 million in annual re enues, for an undisclosed amount. (Our e timate: $30 million.) The sale gives Stanl access to the huge Navair job it would ot erwise not have had—but violates tl terms of the government deal, which sti ulates that without a waiver any "transfer ownership shall result in termination of t contract."

So far, it hasn't. Attorney Franco insi

Working the system: J. Maria Whitmore has stacked her company, TeamQualtec, with relativ

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that Chase is still in charge of the company. Confronted with the fact that Stanley characterizes CCI as a "wholly owned subsidiary" in a press release announcing the sale, Franco snaps, "What Paul Chase did with his company is nobody's business."

It is surely the SBA's business. The agency says it found out about the sale from the Navy and is now "inquiring," reports a spokesman. Meantime, CCI continues to receive business from the Navy.

Tough keeping track of all the twists and turns. Buzz Milan, Whitman's onetime colleague at Navair who was involved in awarding the contract, retired from Navair in March 2002, then joined Coalition Solutions Integrated, a military consultancy. CSI, according to what Whitmore told one high-level TeamQualtec worker, receives several thousand dollars a month in consulting fees from TeamQualtec.

Milan has recruited friends. Last spring a pal from Navair, Lawrence (Rocky) Rowland, became TeamQualtec's program manager. According to a former TeamQualtec employee, Milan also lobbied for work on behalf of Urban Planning & Innovations of Kenner, La., arguing the company had a unique data-mining software.

Turns out that UPI didn't even have an "adequate" accounting system. So says a Navair contracting officer in a Mar. 28, 2002 letter, which asserts that "UPI is no longer approved or eligible for subcontracting." But not before UPI's father-and-son team, Nicholas and Keith Baroni, pocketed $800,000 in government funds.

Astonishingly, UPI is still getting a piece of the action, if indirectly. Seven TeamQualtec employees work at UPI's office in Kenner, payroll documents show. And in June, three months after Navair supposedly shut out UPI for "unsatisfactory" performance, Senator Mary L. Landrieu (D–La.) put out a press release boasting that she had secured a $13.3 million chunk of Navair's project for the company. Perhaps it's payback time: The Baronis, along with Whitmore and her consultant John Sylvester, have given a total $11,000 in hard and soft money to Landrieu's reelection efforts, reports Opensecrets.org., a government watchdog that tracks political donations.

The Bush Administration has no plans to reform 8(a). The farce continues. F

# The Mid-Atlantic TIGER

*by Roger Crombie*

nce September 11, 2001, new capital has been committed to the global insur-ce community that exceeds the estimated $24 billion after-tax cost of that palling day. Bermuda's insurance sector will foot about $5 billion of those sses — but almost $20 billion of the new capital has been invested in Bermuda.

he money was mostly raised before Christmas, representing perhaps largest movement of capital in the ory of the human race. It was cer-ly one of the quickest. The Marshall raised $13 billion to rebuild Europe r a four-year period starting in 1948. moon landing announced at the t of the 1960s by John F. Kennedy t $20 billion, spread over nine years. ation-adjusted, both projects exceed-last year's capital commitment to muda, but neither drew down the ey as quickly or as efficiently.

ome $275,000 was raised for each e 63,500 men, women and children g in Bermuda, but it passed through siderably fewer pairs of hands. Existing reinsurance companies and 11 major start-ups split the new money more or less evenly. By June 30, 2002, the number of Bermuda companies writing $1 billion of premiums a year almost doubled to 11. Three years ago, there were none.

Such rapid growth might have swamped a less well-prepared small economy, but Bermuda's insurance market has risen inexorably, averaging 13% annual growth in total assets for each of the past 18 years. It arrived in waves, like the waters that lap this island's shores, but reinsurance now accounts for almost half of Bermuda's GDP.

The giant numbers hide the reality of a relatively tiny capital city, Hamilton, which might accurately be described as an insurance laboratory. Restaurants are full of insurance executives in Bermuda shorts, ties and blazers (year-round business attire for men) discussing enormous transactions or planning sailing weekends.

Despite what sometimes resembles a friendly takeover of an island community by corporations whose basic product is a promise to pay for catastrophic and other losses, Bermuda remains a vibrant tourist destination, in the throes of reinventing its product for the aging rock 'n' roll generation. Graced by some of the finest pink sand beaches in the world, Bermuda is returning to its tourism roots, offering upscale accom-

**Renee Webb**
**Minister**

## Ministry of Tourism, Telecommunications & E-Commerce

Bermuda was among the first to take charge of its cyberspace. Identifying an opportunity to set global standards, the 1999 Electronic Transactions Act was the first such legislation anywhere in the world.

The Act and subsequent standards spelled out government's desire to aggressively promote electronic commerce and create a supportive infrastructure, facilitating offshore e-business opportunities in a tax- and technology-neutral manner. E-commerce is rapidly becoming a significant force in the economy, diversifying the revenue base.

A sophisticated clientele is the target, to whom security of data and information is paramount. The events of September 11, 2001, underlined the importance of adequate business continuity plans, ideally including offshore storage of key data and software.

Bermuda's Ministry of Telecommunications & E-Commerce is promoting business and government to grow online. The Ministry recently introduced an E-government Strategy and is about to publish an E-business National Plan to ensure the continuing development of a relevant and attractive e-business infrastructure in Bermuda.

mtec

modations and a chance to get away, if not from it all, from most of it.

Tuckerstown, an enclave at the island's eastern end, has homes owned by the likes of Ross Perot, Italian Premier Silvio Berlusconi and, famously, New York City Mayor Michael Bloomberg. His highly publicized getaway weekends have reinforced Bermuda's image as the playground of the lucky few. Tennis ace Pat Rafter and movie star Michael Douglas live here; the latter owns a Hollywood-style eatery on land his forebears have owned for the better part of 500 years.

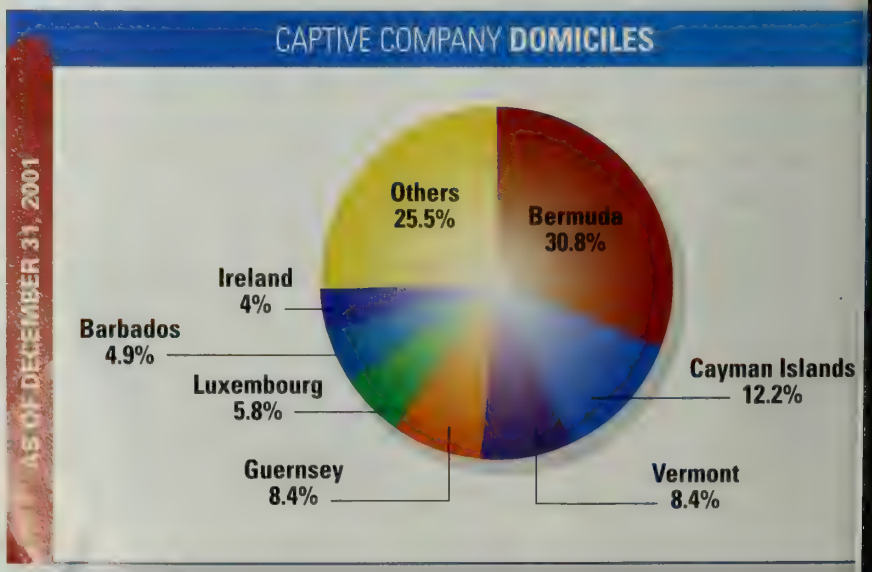
**The Mouse That Roars**

Bermuda occupies 22 square miles of volcanic rock in the western half of the Atlantic Ocean. Demand for workers exceeds supply: A workforce of 37,000 includes about 8,000 foreigners on temporary work permits. Sixty percent of Bermudians are Black, the balance Whites of mostly European extraction. The largest remaining British-dependent territory, Bermuda's traditions are surprisingly old. Its parliament, for example, has sat continuously for 382 years.

Economically, Bermuda punches way beyond its weight. The International Monetary Fund estimated that in 199 Bermuda accounted for 2.5% of inves ment flows for all portfolio assets. I share can only have grown since then

Bermuda insurance and reinsuranc company assets probably exceed $17 billion. Mutual funds managed from th island have assets in excess of $60 b lion. The island's four banks have asse of about $17 billion but hold an addition $70 billion under global custody arrang ments. Other trust assets managed fro Bermuda are not publicly valued, but th probably exceed $200 billion. A billi here, a billion there — pretty soon it ad up to half a trillion dollars.

The Bermuda dollar is on par with th U.S. dollar, and both currencies flo interchangeably. GDP for 2001-02 w $3.5 billion. The government raises a spends more than $600 million annual Bermuda is directly plugged in to glob conditions; the economy is curren flat. The effects are not likely to grave since international business the local catchall phrase for insuran banking, trust and corporate services continues to grow at a solid cl Difficult conditions elsewhere, how er, may mean a further shift away fr the hospitality-based economy t

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**Chief Executive Officer**

## Bermuda International Business Association

The Bermuda International Business Association (BIBA) comprises about 100 Bermuda-resident service providers: banks, legal and accounting firms, financial advisers and trust, management and e-commerce facilitators.

BIBA bridges the private sector and the Bermuda government to develop and promote the island as the world's preeminent business and financial services jurisdiction.

Members include some of the world's most respected professional services organizations. Bermuda's international business sector is more than 100 years old, and many BIBA members are third- or fourth-generation professionals.

BIBA's primary goals are to:

- Achieve sustainable growth in foreign currency earnings, new business and employment opportunities
- Educate the local and international communities on the advantages of international business in Bermuda.

Bermuda probably has the highest percentage of service professionals of any country in the world. BIBA brings them together under a single banner to market an island community informally known as Bermuda Inc.

B I B A

BERMUDA INTERNATIONAL BUSINESS ASSOCIATION

once supported Bermuda's vitality.

Bermuda does not levy income, corporate or capital gains taxes, although it raises duty on all imported goods at rates as high as 33%. Inflation for the year to September 2002 was 2%. The borrowing ceiling of the Bermuda government has only recently been raised to $250 million, just 7% of GDP. Moody's Investors Service rates Bermuda's foreign currency debt Aa1, citing favorable macroeconomic fundamentals, high per capita income (the world's fourth highest), prudent fiscal management and low debt ratios. You don't know the meaning of the term managed growth until you look at the way Bermuda has turned itself from what was essentially a quaint fishing village in 1950 to the world's premier international financial services cent with minimal difficulty.

"Bermuda's economic success mu be attributed to its highly skilled a dedicated workforce," explains Prem Jennifer Smith, the island's first elect female leader. "Over the years, t Bermuda government has achieved th delicate balance between protecting c limited natural resources and the nee of a sophisticated and culturally diver community. Renowned for their frienc ness, Bermudians have developed unique understanding of the needs our guests that encourages them return to our shores year after year."

**Venture Capital**

Some time between 1503 and 151 Spanish explorer Juan de Bermudez r

### A BRIEF HISTORY

| | |
|---|---|
| 1620 | Bermuda's first Parliament is convened and its first constitution formulate |
| 1749 | The population of Bermuda reaches 9,200. |
| 1784 | Bermuda's first newspaper is established. |
| 1834 | Slavery is repealed throughout the British colonies. |
| 1873 | A Bermudian, Mary Outerbridge, introduces tennis to the U.S. |
| 1920s | Tourism emerges as a major pillar of Bermuda's economy. Furness Witl builds a succession of luxury liners for the New York-to-Bermuda run anc six-story Bermudiana Hotel west of the city of Hamilton. |
| 1935 | The first offshore company is established in Bermuda, setting the stage f the evolution of an expanding international business sector. |
| 1966 | Universal suffrage is introduced, giving every Bermudian over the age of two votes apiece in 20 constituencies. Previously, only landowners could vot |
| 1968 | A new constitution is enshrined, and the first general election with politic parties is held. The United Bermuda Party wins 30 of the 40 seats. |
| 1998 | In the general election of November 9, the Progressive Labor Party, after mo than three decades as Her Majesty's Loyal Opposition, wins 26 seats, ar Bermuda gains her first Labor government. |
| 1999-2001 | The OECD, FATF and KPMG's review of Bermuda for the British governme rubber-stamps Bermuda's adherence to "the highest international standards |
| 2002 | Constitutional changes result in a system of "one person, one vote of equal value |

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iel Sands $625, Clear View Suites $779, Elbow Beach $605, Fairmont Hamilton Princess $555, Fairmont Southampton Princess $565, Fourways Inn $765, rotto Bay Beach Hotel $465, Harmony Club $525, Marley Beach Cottages $755, Newstead Hotel $599, Pompano Beach Club $659, Rosedon $555, onesta Beach Resort $475, Stonington Beach $655, Surf Side $485, call for Aunt Nea's Inn, Cambridge Beaches, Royal Palms, Sandpiper Apartments packages.

ate is based on three-night accommodation at Grotto Bay Beach Hotel from Boston based on midweek travel (Monday-Thursday) through GoGo Worldwide Vacations. Travel must be booked by March 31, 2003 d is valid from November 1, 2002 - March 31, 2003. Actual effective dates may vary by hotel. Compliments of Bermuda vacation packages are available at slightly higher rates for travel through April 7, 2003. ckage includes 3 nights accommodation at participating properties, roundtrip flights, roundtrip airport/hotel transfers in Bermuda, Passbook to Savings and a US$100.00 credit voucher per booking (must be years or older and some restrictions apply). The promotion credit applies one per room based on double occupancy. Prices are per person, including double occupancy hotel accommodations, hotel taxes & rvice charges. PFCs, surcharges, September 11 Security Fee, and other international taxes are not included. Offer is not combinable with other offers and is for new bookings only. Rates may vary according to e of departure, room type, and availability of airfare. Rates are subject to change without notice. Blackout dates and other restrictions may apply. Prices and program content are subject to change without notice.

**Judith Hall-Bean**
**Director**

## Ministry of Tourism

Extraordinarily friendly people, pink sand, some of the world's best wreck diving, easy access from the eastern seaboard. Bermuda may be the epitome in the public's mind of a high-end travel destination, but attracting and satisfying 500,000-plus annual visitors, one at a time, is a challenging business in changing times.

Over the past 20 years, the Ministry of Tourism has overseen real change in Bermuda's hospitality industry. Visitors who arrive by air and stay at local accommodations now find half a dozen of the world's finest hotels — managed by well-known names such as Fairmont and Mandarin Oriental — and a broad band of more intimate properties.

With offices in Atlanta, Boston, New York, Toronto and Washington, D.C., and partnerships with European travel wholesalers, the Ministry is making sure Bermuda's message is heard around the world. Its success is measured by tourism's continuing contribution to Bermuda's comfortable way of life.

BERMUDA DEPARTMENT OF TOURISM

across those uninhabited shores, about 800 miles off the coast of the Carolinas. Sebastian Cabot's 1544 *Mappa Mundi* labels Bermuda "The Devils' Islands," in part because several ships were wrecked off Bermuda, giving rise to the perception that demons ruled the land.

In 1607, a British colony was established at Jamestown, Va., the first permanent English settlement in the New World. Early in June 1609, nine ships under the flag of the Virginia Company set sail from England to carry supplies to the struggling colony. The *Sea Venture* was the little fleet's flagship, with Admiral Sir George Somers in command. On July 23, near the Azores, a heavy storm scattered the ships and drove the *Sea Venture,* with 150 aboard, far off course to the south. For four days, the crew battled to keep the wooden vessel afloat. On Friday, July 28, Somers spied land so close that trees could be seen bending in the wind.

The admiral tacked to within a mile of the terra incognita, but with the water just 4 fathoms deep, he decided to run inshore as close as possible and then abandon ship. The vessel foundered on the island's coral reefs. By nightfall, historian William Zuill wrote in his *Bermuda Journey,* every man, woman and child had been safely landed. Bermuda (also known as the Somers Isles) had been settled by act of God and duly inspired Shakespeare to site *The Tempest* in the "still-vexed Bermoothes."

The inadvertent settlers were the island's first inhabitants. After Virginia threw in its lot elsewhere, Bermuda became, and has remained, Britain's oldest overseas territory.

**The Isles of Rest**

Despite all the economic activity, Bermuda remains one of the most gloriously understated vacation destina tions. No casinos, few nightclubs, grea restaurants, superb natural feature (including some of the world's bes beaches) and unusual shopping ar among the visitor highlights — no exactly the go-go fare available in s many modern destinations. That's th point: activity, yes; hyperactivity, never

An African Diaspora Trail, for example allows visitors to bring Bermudian histo ry to life. Trips can be arranged to man of the smaller islands surrounding th six main, linked islands that form Bermuda. A visit to Nonesuch Island, spectacular nature reserve, can b arranged. St. George's, a Worl Heritage Site, contains some o Bermuda's most interesting building and the oldest church in the Wester Hemisphere.

About two hours by air from half dozen eastern seaboard gateways Bermuda is also served by regular direc flights from London.

"Under our former minister, Davi Allen (a beloved figure who died tragi cally in August), the Ministry of Tourism has taken a deliberate approach t developing Bermuda's assets," says Director of Tourism Judith Hall-Bean "We cater to two distinct markets those who fly to Bermuda and stay i our guest accommodations, and cruise ship visitors. Our challenge is to satisfy both groups' disparate needs."

Bermuda does not formally identify its visitors separately. After all, if a busi nessman attends a board meeting on Friday and plays golf on the weekend a one of the island's nine courses, how should his visit be categorized?

**Bank Notes**

As with its hospitality industry Bermuda's watchword in the financia services arena is quality, not quantity

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**Jack L. Wesley**
**President & Chief Executive Officer**

## sEnergy Insurance Ltd.

After September 11, 2001, commercial markets wouldn't or couldn't provide affordable, stable long-term business interruption and excess property damage insurance. Such coverage is fundamental for energy companies and their high-value business operations.

For a dozen such companies around the world, the solution lay in sEnergy, a Bermuda mutual insurance company formed May 1 to provide coverage to its members*, using the infrastructure of Bermuda's Oil Insurance Limited (founded 1971, assets $2.8 billion) and Oil Casualty Insurance, Ltd. (1986, $0.9 billion). Both were established following similar capacity shortages.

The energy industry has historically pioneered the provision of long-term mutual solutions for its insurance needs. sEnergy continues this tradition, providing elegant and efficient products that focus on the specific business requirements of its members.

**Borealis (Denmark), Petro-Canada and NOVA Chemicals (Canada), Statoil (Norway), Sasol (South Africa) and CITGO Petroleum, Duke Energy, El Paso, Lyondell Chemical, Phillips Petroleum, Tesoro Petroleum and Valero Energy (U.S.).*

sEnergy
INSURANCE LTD.

Only four banks are licensed to do business; they are among the island's oldest institutions.

In 1758, Nathaniel T. Butterfield founded an eponymous merchant-trading firm. A century later, it became the Bank of N.T. Butterfield. The Bank of Bermuda, also more than 100 years old, has operations around the offshore world. The primary constituent of a vibrant Bermuda Stock Exchange (ticker: BSX), the bank listed its shares in April on the Nasdaq exchange.

Bermuda's banks are part of the FEDS and SWIFT systems; billions of dollars flow through them daily. International trust companies, such as Coutts and Schroders, service overseas clients from Bermuda.

**Professional Associations**

Bermuda's financial service providers — lawyers, accountants, trust and management companies, brokers and financial advisers — have equally lengthy pedigrees. The "exempt company" was invented in Bermuda 67 years ago. On June 30, 2002, 11,806 of them were in operation, alongside 2,772 local companies and 1,214 exempted partnerships and nonresident companies with a Bermuda presence. Most household names in American business maintain some kind of Bermuda operation, chiefly insurance-related.

Why Bermuda? "A system of sound but sensible business regulation, a tradition of governmental collaboration with the business sector on legislative reform, a professional services infrastructure comprising highly skilled individuals, reliable and modern telecommunications service and a dependable legal system based upon common-law principles with the right of appeal to the Privy Council are just some of the attributes that make Bermuda an ideal jurisdiction for companies seeking to co duct international business," say Finance Minister C. Eugene Co "These factors, combined with th island's long-established commitme to maintaining quality standards via i 'know your customer' practices, hav enabled Bermuda to achieve the prom nence as an international business cen ter that it enjoys today."

Two law firms, Conyers Dill Pearman and Appleby Spurling Kempe, are leaders in the offshore com munity worldwide. More than half th companies quoted on the Hong Kon index are domiciled in Bermuda and ar counted among their clients and thos of other local law firms.

The Bermuda International Busines Association (BIBA), which gathers mor than 100 of the largest service provider under a single banner, actively pr

**BERMUDA INSURANCE MARKET**

1983 to 2000 (year-end)

$ billion

| | Total Assets | Capital & Surplus |
|---|---|---|
| 1983 | 17.1 | 8.4 |
| 1984 | 22.2 | 9.9 |
| 1985 | 24.5 | 10.2 |
| 1986 | 30.9 | 12.5 |
| 1987 | 34.9 | 15.0 |
| 1988 | 38.7 | 14.4 |
| 1989 | 44.5 | 17.4 |
| 1990 | 48.0 | 18.1 |
| 1991 | 52.6 | 19.9 |
| 1992 | 58.8 | 21.9 |
| 1993 | 69.9 | 29.0 |
| 1994 | 76.1 | 29.8 |
| 1995 | 95.0 | 36.9 |
| 1996 | 99.9 | 42.5 |
| 1997 | 111.8 | 48.4 |
| 1998 | 116.4 | 51.2 |
| 1999 | 131.6 | 54.4 |
| 2000 | 146.0 | 59.2 |

Source: Bermuda Insurance Institute

# BERMUDA

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motes Bermuda around the world, attending dozens of events and carrying the flag far and wide. "Bermuda is recognized throughout the business community worldwide as the epitome of a well-managed jurisdiction," says Richard Calderon, BIBA's chief executive officer. "Investors appreciate that the quality experience they have with their first point of contact, perhaps the law firms or the banks, extends to every aspect of the services they will receive as a client of Bermuda Inc."

**The Wired Island**

Bermuda took and has held an early lead in the development of e-commerce. The 1999 Electronic Transactions Act has been followed this year by a groundbreaking E-Government Report and a strategic E-Business National Plan. The online message is in line with the island's other operations: quality first. There is no place in Bermuda for such electronic activities as gambling or pornography, nor physical space for monstrous server farms. The goal is to attract a base of knowledgeable, up-market companies whose virtual operations can be managed from Bermuda.

"Bermuda's approach to e-commerce is much the same as its approach to bricks-and-mortar business," says Telecommunications & E-Commerce Minister Renee Webb, recently named to also run the island's Tourism Ministry, which is seen as a natural fit. "We would encourage the right kind of start-up, but generally we are looking at existing businesses, which are increasingly migrating onto the Web."

Determined to ensure that the benefits of e-commerce reach all Bermudians, her Ministry is actively involved in transferring as many governmental functions as possible online. Bermudians have taken to the Internet with enthusiasm; two-thirds of Bermuda homes and virtually all offices have Internet connections. Schools are likewise embracing the wired world. Bermuda is determinedly becoming an e-business jurisdiction apart.

**Alternative Risk Transfer**

Of all the markets it serves, Bermuda is probably best known in insurance and reinsurance circles. It has led the world in captive insurance since it pioneered the business in the 1960s. Just under a third of the world's more than 4,000 captives are Bermuda domiciled.

In the mid-1980s, two huge reinsurers, ACE and XL Capital, set up in Bermuda. Now occupying the former site of the Bermudiana Hotel, they earned net premiums in excess of $10 billion between them in the first half of 2002. A "third wave" of property catastrophe reinsurers attracted $4 billion in new capital to Bermuda in the wake of 1992's Hurricane Andrew, then came September 11, 200 and the redistribution of the global re surance industry, centered on Bermud

The insurance markets are still sorti themselves out in the wake of tho events. In May, when business int ruption and excess property dama coverages proved impossible arrange, a dozen energy compani formed their own insurer to solve th problem. sEnergy Insurance got off to flying start and is attracting new me bers from a broad spectrum of ene companies worldwide.

"Faced with the problem of shortag in crucial areas of coverage, the ener companies looked back at themselv and said: 'We've done this before. If t need is that great, why not provide c own capacity?' " says Jack L. Wesl president and chief executive officer sEnergy. "Once we had identified t solution, there was never any doubt our minds that Bermuda would be t right location."

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# 2003 INVESTMENT GUIDE

Self-employment has a powerful magnetism. Who wouldn't want to create his own dream job and amass wealth while answering to no one? For some people, it isn't just a dream but a necessity—corporate jobs are hard to come by. And a corporate severance check may provide the startup capital. In 2002's first half, 11.4% of jobless managers and executives launched their own businesses, says Challenger, Gray & Christmas, up from 7.9% for the same period in 2001.

But the specter of failure always hovers over new enterprises. Many a plucky entrepreneur has succumbed. The lamentable reality is that you always must answer to someone, whether the Internal Revenue Service, a franchise company or your customers.

This issue offers a treasury of advice on following your go-it-alone dream. Here are solid tips on taxes, which are ever-present snares for the unwary, especially those opening new businesses. We show you the ins and outs of funding a retirement program when there's no corporate 401(k) anymore *(p. 154)*. Ditto for health insurance, a must-have *(p. 158)*. Do you need to incorporate or not *(p. 164)*? How can you be successful as a franchisee, a much tougher proposition lately than in Ray Kroc's day *(p. 168)*?

Also in this issue, we unearth the harsh truth about rosy earning reports that persist even in an era of supposed reform *(p. 172)*. Plus we show how charitable gifts can go astray *(p. 182)*.

Real estate is hot today: We describe why now may be the time to sell your home *(p. 194)*—and how to be an apartment-complex owner *(p. 190)*. And for oenophiles, here's a how-to on starting your own vineyard *(p. 200)*. Cheers. F

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# A PLAN OF ONE'S OWN

**Here's a great reason to be self-employed: The tax breaks you get to save for retirement.**

BY BRIGID MCMENAMIN AND JANET NOVACK

When Congress sweetened the tax breaks for retirement saving in 2001 some of the juiciest benefits went to the self-employed. If you work for yourself, by day or by moonlight, take a new look at your retirement plan choices. If you don't, try to generate some self-employment income. You may be able to shelter a large chunk of it from current income taxes and rebuild your battered retirement accounts.

Deborah C. Canada, 53, retired in April as vice president of human resources for Union Acceptance Corp., a car financing company. She now works part time for the sales force research and training business her husband, Richard, an Indiana University faculty member, runs on the side. "I would have thought long and hard before I retired had it not been for what we could save for retirement through Dick's business," she says.

This year Deborah and Richard, 57, are each putting $12,000 pretax in the 401(k) plan of their firm, the Dartmouth Group. Dartmouth will contribute another $8,000 for her and $29,000 for him to a profit-sharing plan. The Canadas won't be taxed on that either until they (or their children) draw it down some day.

The Canadas have lots of company: 30% of families with adjusted gross income of $200,000 or more had self-employment earnings in 2000. And a higher percentage work for themselves at some point, since Americans use self-employment as a bridge between jobs and as a way to combine careers and kids or stay productive after 65. The fattened savings breaks provide yet another good reason to work for yourself.

"There's no question the retirement rules are slanted in favor of the self-employed," says David R. Marcus, a partner with Marks Paneth & Shron in New York. One of his self-employed clients in the entertainment business is putting $320,000 pretax into his defined-benefit pension plan this year.

To save that much, you'll need an accountant, an actuary, a custom-designed plan and a big income. If your earnings are more modest, you may be able to use an off-the-shelf "defined contribution" plan from a mutual fund company, broker, bank or insurance company. To pick the right type of plan for you, first narrow your options based on the amount you can save each year. Then factor in whether you have a pension at a regular job; whether you have employees or might hire some one day; and whether you want to borrow from your plan.

## UNDER $3,000

If you have no other pension plan and little cash to spare, open a traditional deductible individual retirement account. You can shelter up to $3,000 ($3,500 if you're 50 or older) of your self-employment earnings. But if you have another pension plan, eligibility for a deductible IRA starts to phase out when adjusted gross income hits $34,000 for a single, or $54,000 for a couple. If you don't have a plan, but your spouse does, phase-out begins at $150,000.

## UP TO $10,000

In this savings range a Simple IRA might suffice. Paperwork is minimal (relatively speaking). A self-employed person can shelter up to $7,000 of earnings, pretax, in 2002, as an "employee" contribution and put away another 3% of earnings, up to $7,000, as an "employer" contribution. Allowed employee contributions will rise $1,000 a year to $10,000 in 2005. If you're 50 or older, you can put away an extra $500 as an employee "catch-up" contribution in 2002. That bonus rises $500 a year to $2,500 in 2006. It's too late to set up a Simple for 2002—the deadline is Oct. 1.

Nevertheless, if you have, or might hire, an employee, a Simple can be a good choice: You have to contribute only 1% to 3% of salary for each worker and don't have to worry about dog-in-the-manger nondiscrimination tests that (in other plans) limit what you can save if your employees don't save.

A Simple won't work for some moonlighters who have 401(k) plans at work. If you've made the legal maximum allowed employee contributions to a 401(k)—$11,000 for 2002 or $12,000 if you're 50 or older—you can't make additional employee contributions to a Simple IRA or another 401(k). But because of nondiscrimination tests, many big company plans prohibit better-paid workers from contributing the full $11,000. If you work for state or local government and have a 401(k)-like plan known as a 457, you can double dip, putting the maximum in both the 457 and a Simple or 401(k). That's what Richard Canada does.

## ooting for the Green

rah and Richard Canada are using his consulting
ess to put away an extra $61,000 pretax this year.

## UP TO $40,000

If you want to save more or can't use a Simple, consider a SEP-IRA or a profit-sharing plan. The maximum that can be put in these for 2002 is $40,000, or $41,000 if you're 50 or older and use a profit-sharing plan with a 401(k). You can set up and fund a SEP for 2002 until the due date for your 2002 tax return, including extensions. A profit-sharing plan, also called a profit-sharing Keogh, must be set up by Dec. 31, but need not be funded until you file your return. Both plans are funded by employer contributions of up to 25% of "modified net" earnings. (Translation: If you're an unincorporated sole proprietor, that's 20% of your net after subtracting one-half of your self-employment Social Security and Medicare taxes.)

The long-popular paired Keogh, which combines a profit-sharing plan and a money-purchase plan is now obsolete. If you've got a money-purchase plan, roll it into a profit-sharing plan or a SEP—contributions to both are totally discretionary each year.

Which one is better? A SEP is simpler and doesn't require annual filing of a Form 5500 with the IRS. If a profit-sharing plan has more than $100,000 in assets, or you have employees (other than your spouse), you must file the form. But if you do have employees, the SEP has disadvantages: More part-timers must be covered and there's less flexibility to design the plan to suit your needs. Moreover, in some states a SEP has less protection from creditors.

The key difference, however, is that you can add a 401(k) allowing employee contributions to a profit-sharing plan, but not to a SEP. The new law exempts employee contributions from the 25% of earnings limit applied to employer contributions, making a 401(k) ideal for a self-employed person who doesn't earn a lot, but can save a lot. Using a 401(k) you can defer $40,000 (or $41,000 if you're 50 or older) with only $116,000 in salary if you're incorporated, or $152,300 in earnings if you're not. Without a 401(k) you'll need $160,000 if incorporated and $208,050 as a sole proprietor to reach $40,000. The 401(k)'s advantage is about to grow: The maximum pretax employee contribution will rise $1,000 a year from $11,000 in 2002 to $15,000 in 2006, while the 50-and-up catch-up contribution will rise $1,000 a year from $1,000 in 2002 to $5,000 in 2006. Remember, if you're moonlighting and have a 401(k) at work too, your employee contributions are counted together for that limit.

The 401(k) has another new benefit: You can roll money from deductible IRAs, other 401(k)s or a lump sum pension distribution into your self-employed 401(k) and later borrow up to $50,000 from it, whereas you can't borrow from an IRA. The self-employed 401(k)s in the table can cover your spouse or a partner, and generally must be set up by Dec. 31 and funded by Dec. 31 if you're incorporated, or by the time you file your taxes, if you're not. If you have employees who qualify to be included, you'll need a plan that will cost a bit more in fees. Note: Fidelity's plan doesn't allow loans and uses special "safe harbor" rules that *require* you to contribute 3% of earnings and, in most cases, to open the account by Oct. 1.

## $40,000-PLUS

If you can put away more than $40,000 and are 45 or older, consider a defined-benefit plan. The law allows pretax contributions to these plans sufficient to fund a specific retirement benefit, so the older you are when you start the plan, the more you can put away each year. In 2002 a plan can pay a retiring 62-year-old a pension equivalent to a lump sum of $1.9 million, up from $1.3 million in 2001, calculates Frederick Rumack of Buck Consultants. Equally important for folks who have been funding a defined-contribution plan for years: You can ignore the defined-contribution plan's existing balance in accumulating your $1.9 million.

If you have younger employees, a custom-designed defined-benefit plan will allow you to put away big bucks for yourself and little for them. But it can cost $2,000 to $5,000 to design such a plan and $1,000 to $3,000 in annual actuary and accountant fees to maintain it. If this is your first pension plan and it covers at least one unrelated employee, you may be able to claim a $500 federal tax credit for three years, to defray expenses.

One big downside: You generally must contribute regardless of your profits. But you have some outs, short of terminating the plan, to reduce contributions in a lean year. You can delay the plan's retirement age or even, with IRS permission, temporarily suspend contributions.

As with 401(k)s, lower-cost, off-the-shelf defined-benefit plans have started to hit the market. Milwaukee-based Metavante Corp. charges $1,200 (plus $50 per participant) to set up and $1,500 per year (plus $100 per participant) to administer it, a new defined-benefit plan/401(k) combo covering up to five participants. Ron J. Anfuso, 43, a self-employed forensic accountant from Rancho Palos Verdes, Calif., contributed $25,500 in pretax dollars to a SEP-IRA last year, the maximum then allowed for a SEP. This year he's using the Metavante plan to squirrel away $64,476 in pretax earnings. Says Anfuso: "A lot of people aren't aware of how drastically the rules have changed."

## Your Own 401(k)

These low-cost plans are new and are designed to cover business owners and their spouses.

| Plan | Annual fees/comments | Investment options |
|---|---|---|
| Advest Individual(k) | $315[1,2]/ $150 per added participant | Self-directed brokerage account |
| Fidelity Self-Employed 401(k) | free[3]/no loans or 5500 preparation | Fidelity funds or self-directed brokerage account |
| The Hartford Individual 401(k) | $285[1]/$150 per added participant | Either variable annuity or Hartford mutual funds |
| Morgan Stanley Individual(k) | $285[1]/$150 per added participant | Morgan Stanley, Van Kampen, Aim & Alliance funds |
| Pioneer Uni-K Plan | [illegible] participant/$250 for 5500 preparation | Pioneer mutual funds only |

[1]Administered by Bisys. Includes prepa[illegible] filed with IRS if balance exceeds $100,000. If you have an unrelated employee, Bisys offers another plan for $750 a year plus $50 per participant. [2]If you ad[illegible] it costs only $50. [3]There is a $12 annual fee if you have less than $2,000 in a fund. A brokerage account costs $50 a year, but the charge is waived if you ha[illegible] amily assets at Fidelity or make at least two trades a year. *Source: Companies.*

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*1 Includes subscribers for FOMA (3G), PHS, pager and other services.
*2 Source: Telecommunications Carriers Association <PDC (2G)+FOMA (3G)>

# HEALTHY CHOICES

**The self-employed can get health insurance and tax deductions, too. Here's how.**

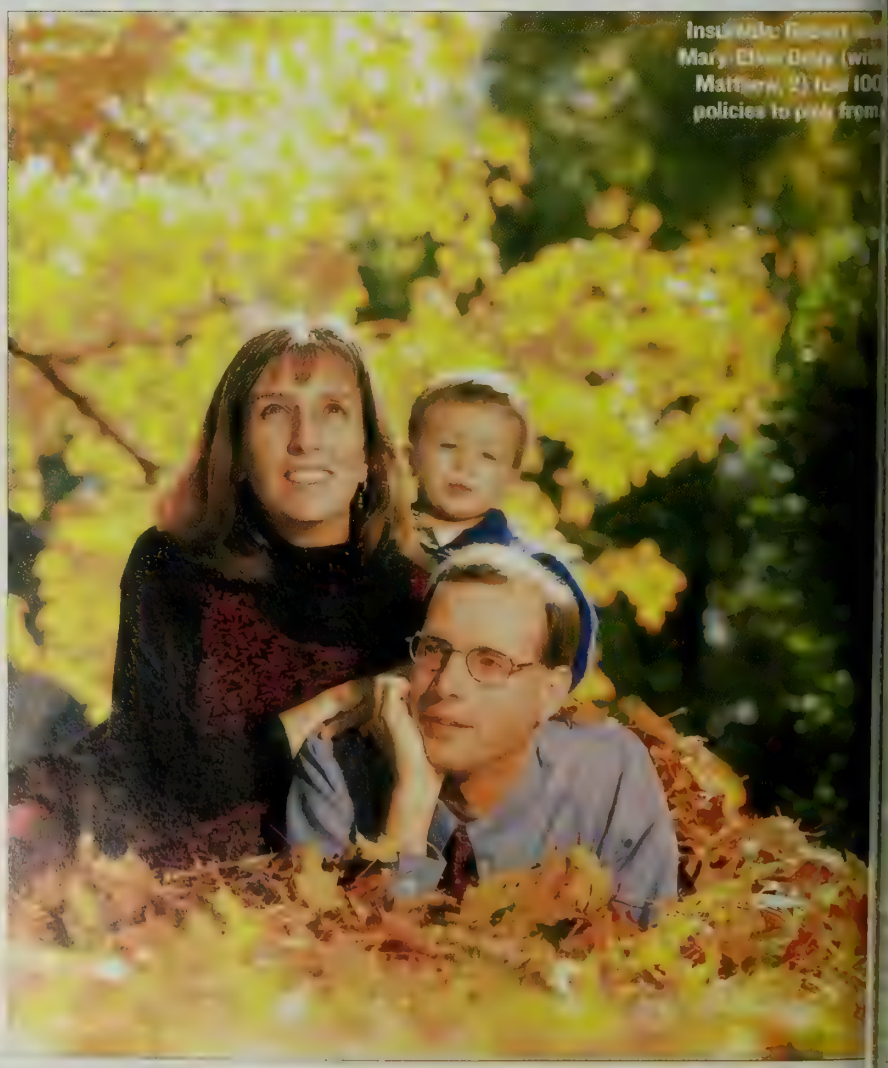
**BY IRA CARNAHAN**

You dream of being self-employed, but you don't take the plunge for fear of losing your health insurance? Take another look. New tax breaks, laws and insurance pools can help you stay insured at an affordable rate.

The easiest solution to the problem, used by a third of self-employed workers with health insurance, is to have an employed spouse who gets a family policy at work. A 1996 federal law makes this convenient; if you quit your job (or are fired), your spouse has 30 days to put the whole family on his or her workplace policy, even if the employer normally restricts mid-year sign-ups.

If you don't have an employed spouse, yet another federal law, this one called Cobra, can help you make an insured transition to self-employment. Cobra requires companies with 20 or more employees to allow departing workers to continue in the company health plan for 18 months, provided the ex-employee pays the full premium and an administrative charge of 2%. Incredibly, you have up to 105 days after leaving your job to pay the first Cobra premium, with coverage then retroactive. This gives you time to look around to see if you can get a better individual policy.

Why look? While Cobra is a rotten deal for employers, [illegible] up with the



Insurance broker [illegible] Mary Ellen Berg (wi[illegible] Matthew, 2) has 100 policies to pick from.

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eorge Divoky, Ph.D., *Researcher, Institute of Arctic Biology, University of Alaska*

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sickest ex-employees in their plans, it also can be a poor deal for an ex-employee who is young and healthy. That's because individual policies, unlike the large group kind, are priced according to risk. Healthy young folks pay less.

Robert Deily, of Arlington, Va., resigned as chief financial officer of Swisscom North America in March to start an online software retailer, MBAWare.com. Swisscom had paid 100% of the premium for Deily, 38, his wife, Mary-Ellen, also 38, and their 2-year-old, Matthew. Cobra coverage from Swisscom would have set them back $727 a month. Instead, Deily chose a plan from CareFirst Blue Cross/Blue Shield for $446 a month. In addition to the savings, he liked the idea of signing up with a new insurer while his family was healthy, rather than risk being less insurable in 18 months when Cobra ran out. (Once you buy an individual policy, your right to renew it is protected by law.)

If even $446 a month—a typical charge for family coverage—gives you vertigo, try focusing on the after-tax cost. Next year you'll be able to deduct from your self-employment earnings 100% of the health insurance premiums you pay, up from a 70% deduction this year and 30% in 1996. This is a valuable "above-the-line" deduction that can't be snatched back by the Alternative Minimum Tax. Warning: If you are eligible for any employer-subsidized health plan, including your spouse's, you aren't supposed to claim this deduction, even if you aren't on your spouse's plan.

Here's yet another intriguing tax break for the self-employed: a Medical Savings Account, also called an Archer MSA, after the former Ways & Means Committee chairman who championed the idea. An MSA plan has two parts. One is an insurance policy with a high deductible—by law it must be between $1,650 and $2,500 for individual coverage and between $3,300 and $4,950 for a family. The other part is the medical savings account itself, which is funded with pretax dollars and can be used to pay those deductibles and other medical expenses. Individuals can deposit up to 65% of their deductible each year, while families can deposit 75% of the deductible in an MSA. The policy premiums are also 100% tax-deductible as of next year.

Unlike the pretax money contributed to the flexible spending accounts offered by many employers, MSA contributions need not be spent in full each year. Leftover cash can remain in the account and earn interest or even be invested in mutual funds. Any gains go untaxed so long as the funds are eventually used for health care. Once you reach age 65, you're even allowed to withdraw the money for other purposes, without penalty, and pay taxes at the ordinary income rate.

The high deductible makes the MSA insurance affordable. A family plan similar to Deily's but with a $4,950 deductible would run perhaps $225 a month. If you want to switch to an MSA plan, do so at the beginning of a calendar year. The law prorates the dollars you can put into an MSA.

Now that insurance premiums, including the higher ones charged for conventional health plans, are about to be 100% deductible, MSAs have less of a tax edge than when they were created in 1996. Another problem: They've only been authorized by Congress through 2003, raising the possibility you might have to look for a new policy when you're not as healthy. Still, MSAs can be attractive, particularly if you run up big bills for items that aren't covered by regular insurance, such as alternative medical treatments, orthodontia or laser eye surgery. These can be paid from an MSA. Nationally, two of the largest MSA sellers are Golden Rule Insurance and Fortis Health, which also sells its policies through State Farm. Blue Cross/Blue Shield plans in a number of states also offer MSAs.

How do you sort through all your plan options, with their different deductibles, copays and lifetime maximums? Deily turned to Health Insurance Specialists, a Rockville, Md. insurance brokerage, which recommended a dozen plans out of the more than 100 he was eligible for. You can also use an online service—ehealthinsurance.com, for example—to generate detailed comparisons. Also be sure to investigate plans offered by the professional associations you belong to. But wherever you decide to buy, first check out the insurer. Make sure it is licensed by your state, and check its financial soundness with a rating firm like A.M. Best (www.ambest.com, free registration required), advises Samuel Bennett, a Columbia, Mo., broker.

Finding a broker you trust can make a big difference. In contrast to products such as whole life insurance, health insurance pays brokers fairly modest commissions—generally 10% or so of the premiums—every month. That means a broker has less incentive to push you into one plan versus another, but also less incentive to spend a lot of time with you parsing every detail of the plans. Still, a good local broker should be able to tell you which insurers have a history of raising rates faster than average or denying legitimate claims, and which are likely to stick around your state—key considerations, since you don't want to have to switch insurers later, when you may not be as healthy.

What if your health is already poor? About 10% of applicants for individual health insurance are rejected outright and another 20% can't qualify for standard-price policies. Don't give up. State legislators and regulators have developed an array of high-risk pools, guaranteed-issue laws and other alternatives. You can get the details at www.healthinsuranceinfo.net, run by Georgetown University's Institute for Health Care Research & Policy. It offers guides to options for each of the states. There's helpful information at the site for the healthy, too.

## DO'S AND DON'TS
## Health Insurance

- ✔ If you quit your job, move fast if you want to sign up for an employed spouse's insurance.
- ✔ Consider a Medical Savings Account. It's like a flexible spending account, only better.
- ✘ Don't sign up for Cobra coverage from your ex-employer before checking out other options.
- ✘ Don't give up. Coverage of some sort is usually available, even if you have health problems.

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# CORPORATE COVER

You don't need to incorporate to work on your own, but you do need protection.

BY MATTHEW SWIBEL

After he was laid off in April from a videogame company, Jeffrey Goodsill of Concord, Mass. decided to start his own. His lawyer advised him not to waste money incorporating until he had a business plan and started to negotiate financing. In September Goodsill, 41, joined as a shareholder in a five-person gaming startup that had just set up as an S corporation. "I'm glad I waited. Incorporating would have been an unnecessary headache," he says.

You don't need to form a corporation to start out on your own. Almost 18 million Americans do business as unincorporated "sole proprietors" and report their revenue and expenses on Schedule C of their personal income tax returns. But sometimes there are good legal, tax or business reasons to form one of the entities available today from the corporate alphabet soup. They include traditional Subchapter C corporations, which pay corporate income taxes, and so-called passthroughs, which don't. The latter category includes Subchapter S corporations, limited partnerships (L.P.s) and the newer limited liability companies (LLCs). Since a passthrough doesn't pay federal income taxes of its own, its taxable income is passed through to the tax returns of its owners, who then have to declare it whether or not the profits are distributed as cash.

Forming a no-frills S corp, L.P. or LLC costs $750 to $1,500 in lawyer and filing fees, depending on the state. You can do it yourself on the cheap with canned documents available on the Internet. But, particularly if you're planning on taking on partners or investors, you'll need help in deciding which entity suit

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you best and in making sure the documents protect your interests. Some points to consider:

## LEGAL RISK

As a sole proprietor you are personally responsible for all of a business' liabilities, including its debts and any liability judgments against it. But buying insurance can provide adequate liability protection and a corporate or partnership shield alone might not get you off the hook for negligence, says Buffalo lawyer Scott Friedman. You probably already have car and homeowner's insurance and an umbrella policy for $1 million or more that kicks in after your normal auto and homeowner's limits are exhausted. Good news: Your car insurance normally covers some business use of your car. Bad news: Your homeowner's policy offers little protection for business use of your home.

If you are unincorporated and work from home, but don't have many business visitors, you may be able to get by with a business endorsement on your homeowner's policy. For $40 to $200 a year, it should cover $5,000 to $10,000 in office equipment from theft and should protect you on the liability side if the FedEx man slips and sues. (But plans vary, so check with your agent and read the fine print.) If you hold regular business meetings at your home, or if you're incorporated and your policy doesn't allow endorsements for corporations, you'll probably need a separate business policy, at a cost of $300 to $400 a year. Some types of home-based businesses *always* need separate coverage, e.g., photography studios, day care providers.

Whether incorporated or not, if you're an architect, engineer or one of dozens of other professionals, you really should buy errors and omissions insurance. For an architect, $1 million in coverage (a common amount sold) starts at $1,500 a year.

Think you're not at risk? Try thinking as creatively as the plaintiffs' bar. Barry and Jennifer Gribbon, of Los Angeles, formed [illegible] Entertainment after he was laid off last year as a vice president of Scripps Productions. They produce *Food Finds* for the Food Network and carry $1 million in E&O insurance per project. Muses Barry: "We have no way to guarantee that guests on the show are telling the truth. If some chef says to add a given amount of salt and it turns out to be a lethal dose for someone watching [illegible] covered if the network gets sued and says it's our fault."

Note that while a limited partnership or a limited liability company theoretically limits personal liability for those who form it, there's less protection if you perform day-to-day operations or make decisions for the business. So get insurance. An entity should, however, shield you and your investors from normal business debts should your business go bankrupt—unless you personally guaranteed them.

If you own multiple pieces of real estate, keep each in a separate LLC, advises Andrew J. Sherman, a Washington, D.C. lawyer and author of *The Complete Guide to Running and Growing Your Business*. That way, he says, if something falls on a kid's head in a store you have leased to a toy retailer, your other properties won't be at risk.

## TAXING MATTERS

C corporations have a big tax disadvantage: Their profits are taxed at the corporate level and again if and when they are distributed. Yet a C can still make tax sense if its profits are likely to be modest and you want to retain profits in the business. A corporation's first $50,000 in annual profit is tax free and the next $25,000 is taxed at just a 15% rate. But: If yours is a "personal service corporation"—meaning the corporation's main output is your own work effort, for instance as consultant or pet groomer—then all your profits are taxed at a flat 35% corporate rate and you'll usually do better with a passthrough. State taxes might influence which passthrough you use. California levies an $800 a year minimum tax on all LLCs, C and S corporations, regardless of their profitability, but not on L.P.s.

Another issue is payroll taxes. The self-employed pay a 12.4% Social Security tax on the first $84,900 of earnings for 2002 ($87,000 for 2003) and a 2.9% Medicare tax on all earnings. (Note: If you have paid the Social Security maximum at a day job, you don't have to pay it again on your self-employment income.)

Caution: While LLCs are popular these days, it is unclear under current law whether owners are liable for the self-employment tax on all their earnings, or on just the salary they take out. You can avoid this problem in two ways. One is to create an S corp subsidiary under the LLC. Say you have a medical practice and own the building housing your office. Stick the building in the S corporation and pay it rent. The net earnings of the subsidiary are profits and not salary and won't get hit with the extra 2.9% tax. The other solution is to elect to have your LLC taxed as an S corp, which is allowed under the IRS' "check the box" rules, although that solution can create its own complications.

Regardless, if you have capital invested in your business, you need some sort of entity to avoid being unfairly nicked for the 2.9% Medicare tax on every penny you earn. After all, some of what you earn *is* return on investment. Daniel Marshall, 30, who started Blue Ideas, an Indianapolis accessories maker for hand-held PCs, in 2001, has poured $20,000 in savings and $40,000 in borrowed money into the business. He figures his S corp saves him about $2,000 a year in taxes, even after the extra accounting costs are figured in. Just don't be greedy. Pay yourself a reasonable salary, as Marshall does.

### DO'S AND DON'TS
## Corporate Cover

- ✔ **Form a corporate entity if you are taking on partners or investors.**
- ✔ **Buy a business "endorsement" or a separate policy if you use your home for business.**
- ✘ **Don't rush to incorporate just because you are becoming self-employed.**
- ✘ **Don't get stuck paying self-employment taxes on what's really investment income.**

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AMERICAN CENTURY.

Investment Managers

# A BURGER WITH A SIDE OF LOSSES

You can get rich owning a restaurant franchise, if you know what you're doing. Too many new franchisees don't have a clue.

BY CHANA R. SCHOENBERGER

Headaches to go: Subway operator Edward Puskaritz is locked into a draconian lease.

Two things enticed Edward Puskaritz into becoming a Subway franchisee: the chance to work for himself and the chance to make a lot of money. Well, at least he got to work for himself.

A trained accountant skilled in reading the fine print, Puskaritz, now 48, is cursing himself for signing the sandwich chain's restrictive franchise agreements. Those documents allowed Subway to lease him a mall store with expensive common charges, open other outlets near his location and avoid standing up for him against his landlord. "If I could only have done things differently," says Puskaritz, who has sunk $300,000 over 11 years into three struggling Subways north of Philadelphia.

You can make a fortune on a chain restaurant. Early McDonald's franchisees became millionaires. O. Gene Bicknell founded his Pizza Hut franchise, NPC International, in 196[illegible] and took it public in 1984. Last year Bicknell bought back the 35% he didn't already own for $90 million. The franchise now operates 80[illegible] Pizza Huts.

Or you could wind up with next to nothing for a long workweek. The $300 billion food service franchise business has saturated the landscape and is now resorting to price wars to keep the customers coming. McDonald's, Wendy's and Burger King (which parent Diageo wants to unload) are bludgeoning one another with ever cheaper offerings as health-oriented upstarts like SaladWorks and Panera Bread nip at their heels.

High franchisee debt has made matters worse for fast-food entrepreneurs, says Nancy Smith, Denver-based cohead of the franchise practice at law firm Dorsey & Whitney. That's one reason that even McDonald's outlets get into trouble. Each month 20 of the burger giant's 3,000 U.S. franchisees now sell their rights back to the company under financial stress, says Richard Adams, head of the unofficial coalition of McDonald's franchisees, the Owner-Operator Consortium. That's 240 per year (McDonald's counters that it has lost just 90 franchisees

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2002, many for innocuous reasons like retirement.) Cold comfort for anxious franchisees: While 30% of all restaurants fail within the first year, just 8% of brand-name franchise locations go under, says Christopher Muller, associate professor of restaurant management at the University of Central Florida who studies franchises.

Whataburger, a Corpus Christi, Tex.-based chain that sells $2.10 burgers, has gone through two sets of franchisees since 1996 for its three dozen Arizona restaurants. Businessmen Paul Thomas and Paul Cohen bailed out after two painful years, blaming the rapidly rising prices of labor, electricity, TV ads and land. Timothy Taft, president and chief operating officer of Whataburger, thinks Thomas and Cohen's weakness lay in underbudgeting for labor and repairs.

The second group, called Sun Restaurant Group, bought out the partners and then blew money on a marketing gimmick, spending $80,000 on an old city bus, which they had wrapped in Whataburger logos. This bunch filed for Chapter 11 in June 2001, and the chain bought the restaurants back.

> After earning nothing for the first two years, a new franchisee might make just $35,000 to $50,000.

If the perilous life of a food franchisee seems right for you, here are a few pointers.

**Get ready to work hard.** A new franchisee usually takes two years to earn any money. Then he might make just $35,000 to $50,000 yearly, says Donald Boroian, chairman of franchising consultants Francorp in Olympia Fields, Ill. That's why owning multiple restaurants makes sense.

Cynthia Booth, a former banker, has bought three McDonald's in Cincinnati since 2000 and works 60-hour weeks, supervising 170 employees. Her restaurants pull in annual sales of $1.7 million per unit and net her $150,000 in profits each, just above the chain's average.

**Allow for heavy costs.** McDonald's is always suggesting Booth dip into earnings for capital improvements, like the recent $7,000 to revamp an outdoor playground.

Startup costs can vary widely, from $6 million for a Planet Hollywood in Athens, Greece, to a mere $5,000 for a Chick-Fil-A chicken-patty shop in Athens, Ga. A Subway sandwich outlet ends up costing most franchisees around $200,000 for furniture, fixtures and kitchen equipment, which is fairly typical for the industry.

You also can expect to tithe 8% to 10% of sales annually, partly for royalties to the company, partly for local and national ads.

**Check out the disclosure documents.** The company's franchise offering circular is kept on file in 23 states, usually in the secretary of state's office. Federal law requires all franchisers to give a copy to each prospective franchisee at the first face-to-face meeting. The filing details the company's financial situation, sets out franchisees' obligations and often tells how much money they can expect to make.

Even better, the filing lists all the company's current franchisees, meaning you can call them for the real skinny. Ask if the franchisees are getting adequate marketing and operational support from headquarters and if they're making money.

**Scrutinize the rules.** Although the boilerplate contract with franchisees isn't usually subject to negotiation, you can boost your leverage by purchasing multiple units. Often the contract requires franchisees to buy their supplies from a particular vendor, especially if the food's renown is built on a special sauce. Aside from the clauses requiring capital improvements, there are usually mandatory investments in centrally planned technology like new cash registers or database software.

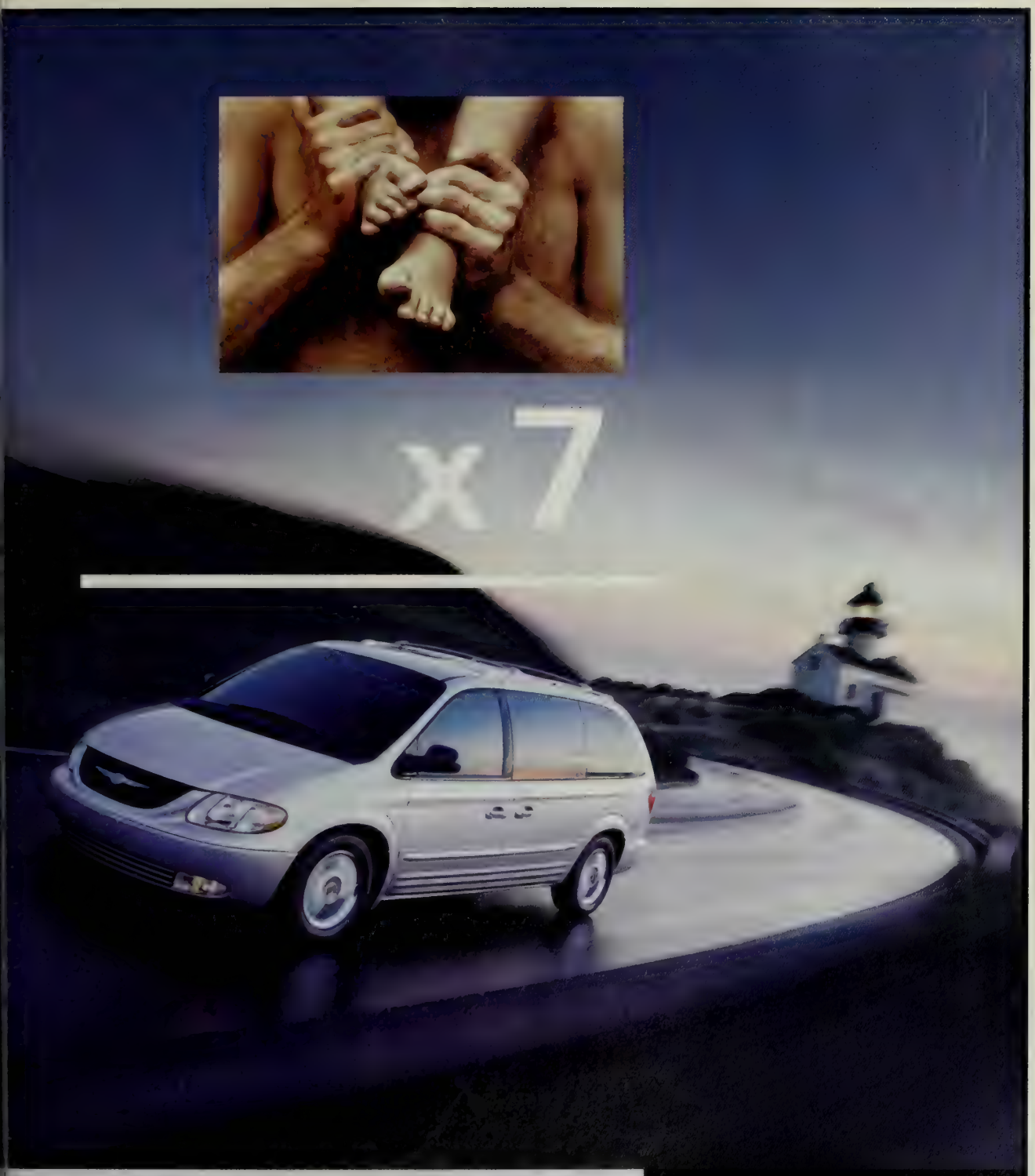
A franchisee-friendly refurbishment clause, however, should include a cap on the amount each owner must pay, or stipulate that the owner won't be forced to renovate until a certain percentage of the system has already done so.

**Expect that fights will be costly.** In addition to a standard noncompete clause, the contract usually details how the company and the franchisee will resolve disputes, including clashes over performance targets like number of hours the restaurant is open or the level of employee training. Franchisees are often better served with arbitration than litigation, which can take longer and cost more. But many contracts require conflicts to be arbitrated in the franchise company's home state, a cost-sink for an out-of-town franchisee. That's why Puskaritz has never taken Milford, Conn.-based Subway to arbitration, as his agreement allows; he says he can't afford to hole up in Connecticut during the process.

Litigation doesn't always help the franchisee. In Houston three state district court cases accuse ice-cream chain Marble Slab Creamery of misrepresenting its results in its franchise offering documents. Two cases are pending, and in January Marble Slab won the third, which is on appeal. One of the unsuccessful plaintiffs is Dan S. Collins, who owned four ice cream shops in the Baton Rouge, La. area with an investor group. Collins says he and his partners lost at least $1 million on their franchises. But a jury bought Marble Slab's argument that they were poor operators who didn't do basic things like keep a balanced checkbook.

**Identify the fire exit.** Quitting a franchise business is more complicated than quitting one whose name you own. Usually the franchise company has the right to approve buyers of existing restaurants, or to buy back the location. That may crimp your ability to get a good sale price.

Still, you can often pass on a franchise to the next generation, although some training of the young is required. At McDonald's even prospective franchisees who grew up behind the counter must graduate from Hamburger U. That's how former AT&T salesman James Lewis, 44, got into the business. He began working at his uncle's New York City McDonald's in 19[illegible] and gradually bought him out, assembling an empire of eight Manhattan golden-arched restaurants and 500 employees. Lewis is fostering his own following as well: Five employees have gone on to own their own McDonald's.

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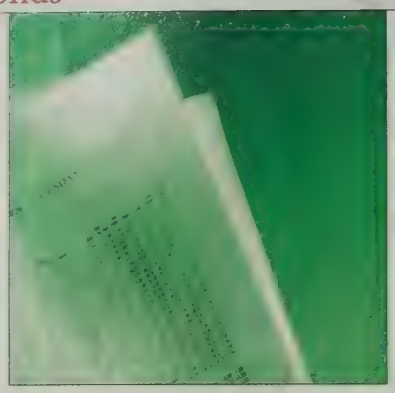

# PRO FORMA PUFF JOBS

**We're still a long way from getting straight talk from companies on their profits. The gaps between companies' net income and their own version of earnings are worse than you thought.** BY ELIZABETH MACDONALD

If you were an executive at VeriSign, the leading seller of Web addresses, which quarterly earnings number would you prefer: negative $4.8 billion or positive $50 million? The huge loss, for 2002's second quarter ending June 30, is a standard net income figure. The profit is a "pro forma" number, which means throwing out the bad stuff.

Pro forma earnings are oxygen to unhealthy companies, especially tech ones. Typically, pro forma fanciers argue that the more pleasant number better reflects the ongoing business while the ugly number only rakes over the dead past. Under generally accepted accounting principles, a large chunk ($4.6 billion) of the VeriSign loss is a noncash writedown of goodwill and intangible assets, reflecting now-soured acquisitions made in the good times. The remaining red ink is related to other nightmares from the dot-com bust, like employee severance and contract terminations.

Trouble is, all those nice plans that went wrong were not illusions. If VeriSign launches a venture that—wonder of wonders—is profitable, the company would surely want us to count this. So why ignore a figure capturing VeriSign's substantial distress, which will continue to affect the company? A Fredric E. Russell, a Tulsa money manager, sees the situation: "'Pro forma' by definition suggests that the expense won't happen again, which isn't true."

## The P&L Prettifiers

For these companies, pro forma adjustments make for a huge swing in (un)profitability.

| Company/business | Recent price | NET INCOME[1] GAAP ($mil) | NET INCOME[1] pro forma ($mil) | DIFFERENCE BETWEEN GAAP AND PRO FORMA ($mil) | DIFFERENCE BETWEEN GAAP AND PRO FORMA as % of market cap | Market cap ($mil) |
|---|---|---|---|---|---|---|
| **VeriSign**/digital certificate services | $7.42 | -$4,803 | $50 | $4,853 | 276% | $1,756 |
| **UAL**/airline | 2.34 | -889 | -503 | 386 | 249 | 155 |
| **GlobespanVirata**/semiconductors | 2.55 | -552 | -11 | 541 | 149 | 362 |
| **Solectron**[2]/electronics | 2.20 | -2,647 | -33 | 2,614 | 144 | 1,812 |
| **Aquila**[2]/electric utility, gas distributor | 4.15 | -810 | 49 | 859 | 115 | 748 |
| **McDermott International**[2]/oilfield services | 3.39 | -234 | -10 | 224 | 104 | 215 |
| **Quanta Services**/telecom services | 2.81 | -177 | 2 | 179 | 92 | 195 |
| **Avaya**/networking products | 1.55 | -534 | -67 | 467 | 83 | 561 |
| **Sapient**/software | 1.25 | -140 | -21 | 119 | 78 | 153 |
| **Palm**/hardware | 11.40 | -259 | -36 | 223 | 68 | 330 |

[1]Latest quarter reported on or before Oct. 23 [2]GAAP net income results noted first in earnings releases. *Source: Multex.*

Charges are a chronic condition at VeriSign. In the third ıarter VeriSign's GAAP loss had shrunk to a still-substantial $80 illion, yet it became a tidy $44 million pro forma gain—cour-sy of ignoring ever more intangible charges and restructuring sts. A review of VeriSign earnings releases back through 2000 ows a similar use of pro forma alchemy.

Despite all the proposals to make accounting more transpar-ıt, pro forma obfuscations are as bad as ever—and cover a ocking number of public companies, according to data com-led by Multex, a New York financial research company. Jaroslaw arzasty, the global estimates manager at Multex, says half of the ıblicly traded companies the U.S. are either losing oney or breaking even on trailing 12-month GAAP rnings basis. Nevertheless, stunning 81% of these ofit-challenged compa-es put themselves in the ack using pro forma cal-lations. The year before it as 72%.

Pro forma first came in gue in the merger-mad 80s, as it was used to help vestors see what the new mbination would have oked like financially had it en a single entity for the evious year or so. Then, as ıprofitable tech outfits ught the popular imagi-tion, creative minds gan monkeying with pro rma to show how won-rful the cool upstarts were thout all that distracting ıff like acquisition and structuring expenses. In 86 and 1987 just 18% of rnings announcements entioned pro forma ults, according to a study earnings releases from 0 companies by Harvard Business School's Mark T. Bradshaw d University of Michigan's Richard G. Sloan. But in 1998 and 99, they found, pro forma earnings had crept into 72%.

We've assembled a rogue's gallery of companies where pro ma adjustments are significant in relation to the company's rket value *(see table)*. For VeriSign and United Airlines parent L, the difference between GAAP profit and pro forma profit s nearly triple the market capitalization.

In their campaign to discredit GAAP, the pro forma compa-es have almost completely won over the analysts on Wall eet. Look at the earnings forecasts from Thomson First Call, the authoritative database of analyst reports. Since writedowns are supposed to be sudden and unpredictable, the analysts make no effort to forecast them. So they gravitate naturally to pro forma numbers that exclude writedowns.

Pro forma numbers move stock prices more than GAAP ones, says a study of 25,000 earnings reports from 1989 through 1997 by two accounting professors, Georgia State's Lawrence D. Brown and Boston University's Kumar N. Sivakumar. And this continues even unto this day of supposed financial puritanism. VeriSign's 21-cent second-quarter earnings per share and its 19-cent third quarter won The Street's accolades. The numbers give VeriSign an apparent trailing price/earnings multiple of 12. By GAAP standards, there is no P/E because the earnings are negative.

VeriSign believes we are overlooking its inherent strengths. A company spokesman says it "has been consistently banking cash every quarter." And in the third quarter, he points out, cash increased to $327 million. That is true: Cash was just $282 million at midyear. But last Dec. 31 cash was higher than now, $727 million.

VeriSign has its defenders. Steven M. Ashley of the investment firm Robert W. Baird in Milwaukee rates the stock an "outperform," contending that "fears of deteriorating fundamentals and/or accounting shenanigans are unfounded." And to be sure, net wipeout or no, VeriSign has been increasing revenue, up 35%, to $947 million this year through Sept. 30, versus the same period a year ago.

But the revenue may not be as good as it looks. From 2001 through 2002's first quarter VeriSign pumped up revenues by $119.5 million via barter and roundtrip revenue deals, where it swapped software licenses for goods and services or booked sales from companies it had invested in. That's 9% of its sales for the period. (It reported no such round deals for the second and third quarters.) VeriSign confirms the numbers, but argues the moves are kosher. F

*Research by William Heuslein.*

If power is destined to shift to Asia, do you want most of your wealth in U.S. equities? BY ROBERT LENZNER

# LEON LEVY SAYS SELL ON STRENGTH

Age can turn a man bearish. For the greater part of the past half-century Wall Street financier Leon Levy has been an optimist. Levy believed that the U.S. economy would, through a succession of business cycles, reignite and spark the higher profits that are the fuel of rising share prices.

Today, at 77, worn but wealthy and still active as an investor, he is more pessimistic about the U.S. economy and stock market than ever before in his adult life. "The outlook for profits is disappointing," Levy says. "It's very hard to tell how bad the economy will be. Still I feel it will be worse than any time since World War II."

Don't dismiss Levy as a stopped-clock bear who stumbled onto the right side of the ticker tape only since March 2000. He amassed a fortune of $750 million, currently ranking him 313 on The Forbes 400, by making bets on the long side. He helped build Oppenheimer & Co. into a successful securities firm and created the Oppenheimer Group of mutual funds (current assets of $125 billion). After selling Oppenheimer to the U.K.'s Mercantile House for $162 million in 1982, Levy multiplied his fortune as a founding partner of Odyssey Partners, a private investment partnership.

Leon Levy: Growing bearish after a lifetime of being a bull.

Levy's newfound bearishness is the result of lessons learned as a young man from his economist father, Jerome Levy. Levy senior used basic economic statistics to predict the direction of the stock market. "Look carefully at the economy, and you will see that the main props for growing profits are not going to be here," Levy junior says.

Those missing struts are the hundreds of billions of dollars represented by the drop in business investment and the trade deficit. Levy also worries deeply about the utter lack of shortages of consumer goods and the degree to which the consumer is in debt.

Take capital expenditures first. From a peak of $1.34 trillion (annualized rate) in August 2000, corporate spending on new plant and equipment had shriveled by 11.9% to $1.18 trillion b

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last May. "It means less money invested in building factories and other commercial enterprises that will pass through to other companies and the consumer and be translated into profits," Levy says. It foreshadows, he adds, weaker profits for companies in the years to come.

Levy also views the U.S.' record current account deficit—$520 billion on an annualized basis in the second quarter—as an inevitable drag on U.S. companies' profits. The largest chunk of this deficit is in trade in goods and services, at $110.6 billion for the quarter, up from $88.9 billion the same quarter a year earlier. Another piece of the deficit has to do with the fact that the U.S. pays more to foreigners in profits, royalties and interest than we receive from them. In other words, a growing fraction of the returns to capital is going to foreign suppliers of capital and not to the bottom line of U.S. companies. (The last item in the current account has to do with government spending.)

To be sure, trade—and foreign investment in U.S. factories—makes U.S. consumers better off. You benefit when Honda offers terrific cars at low prices, even if you end up in a Chevrolet priced to compete with an Accord. But the presence of Honda is bad news either way for your General Motors dividends.

Third, and here Levy cannot be too emphatic: "Nothing is in short supply. I keep asking that question of everyone. And they have no answers." He rattles off consumer products in excess—"autos, fiber optic cable, computers, cell phones, trucks, airplanes, steel, even food."

"It won't get back to the way it was," he says darkly. "If nothing is in short supply then how can profits rise?" More supply than demand triggers a deflationary spiral of lower prices and profits. He doesn't see a replacement source of higher profits on the horizon to break the spiral. "Where is the compelling force for growing profits?" he asks. The consumer not only lacks for nothing, but also is paying down debt or building up personal savings. Wealth is shifting from corporate savings (i.e., profits after taxes and dividends) to households, he emphasizes.

Levy predicts that all the factors reducing profits will prolong the bear market. The [illegible] of household debt to gross domestic product stands at 77%; this [illegible] was 61% at the onset of the last recovery a decade ago. Corporate profits have fallen from a peak of $613 billion in August 1997 to $491 billion by August of 2001—a decline of 20%, despite round after round of fearsome cost-cutting by U.S. companies. "It's wishful thinking to predict another bull market," says Levy.

For all these reasons, Levy is keeping more than 50% of his assets in Treasurys, and advises using any rally in the stock market to unload equities, including once-high-flying tech stocks that have fallen like lead. Levy is short the Nasdaq stock index. Had that index grown by the historic average of 6% since 1990, it would only be at 650 today, Levy notes in his new autobiography *The Mind of Wall Street* (see our Web site for a review, www.forbes.com/levy).

Reflecting his analysis of the U.S. balance of payments deficit, Levy owns a large position in the euro. His bet is the dollar will decline against the European currency because Europe's trade balance is healthier than the U.S.'

Is there anything to buy? Being a value investor in the Graham and Dodd style, Levy would like to own shares of a company whose products are in great demand, but only if that company is selling on Wall Street at lower than replacement value. He sees few likely prospects. He recently took a position in Loews Corp. Carolina Group, the spunoff unit of Loews Corp. that produces Lorillard tobacco products. It controls 9% of the cigarette market and is selling at $19.30, or 5.3 times earnings.

Levy has also bought into Caremark Rx, which manages employee prescription benefit plans and is one of the biggest mail-order houses for prescription drugs. Caremark had revenue of $5 billion for the nine months through September, and is selling at 17 times trailing earnings.

"Sooner or later there will be another bull market," Levy says. But it won't be in technology. It will be in some other area, maybe even another geographic area, like Asia. "If you were planning to build a factory now, where would be the best place?" he asks. "South Carolina? Or China, India or maybe even Russia?"

"Economic power is shifting to Asia," he asserts. That could mean the U.S. stock market is not the place to invest your money for some time to come. Through a hedge fund, L-R Global Partners, Levy owns Kookmin Bank, the South Korean bank that is Asia's 17th largest ranked by assets ($150 billion); Hurricane Hydrocarbon, a Canadian company with huge energy assets in Kazakhstan, and Pacific Corp., the largest Korean cosmetic company. He directly owns a piece of the Russian gas company Surgutneftegas.

Levy is a renowned collector of Roman and Greek antiquities. We ask him if he believes that the U.S. is experiencing a secular decline like that experienced two millennia ago in Rome and, before that, in Athens. It is, he says, not a relevant comparison. The U.S. economy still has the strength to recover. But, he adds, "No one ever stays number one forever. Not Holland. No Spain. Not England. That's the way the world is." ■

## Smoke, Scripts—and Asia

Wall Street eminence Leon Levy likes these companies' prospects for their value or their proximity to hot growth spots in the East.

| Company/business | PRICE recent | PRICE 52-week high | P/E |
|---|---|---|---|
| Caremark/drugs via mail order | $18.26 | $21.95 | 17.0 |
| Hurricane Hydrocarbon/natural gas | 10.96 | 16.05 | 5.2 |
| Kookmin Bank[1]/banking | 33.10 | 54.10 | 18.0 |
| Loews Corp. Carolina Group/tobacco | 19.30 | 34.05 | 5.3 |
| Pacific Corp./cosmetics | 101.08 | 140.82 | 8.8 |
| Surgutneftegas/natural gas | 0.35 | 0.47 | 7.1 |

Stock prices as of Nov. 5. [1]Trades as American Depositary Receipts.
*Source: Multex via FactSet Research Systems.*

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# SPECULATIONS

**Nextel and Kroger are among the pros' favorites in our annual stock picking derby. BY ANDREW T. GILLIES**

Let's hope misery loves company. You may have had a bad year in the market, but the contestants in our annual stock picking contest have had a positively rotten one. Our bulls merely tracked the market, with an 18% loss over the past 12 months, while the bears saw their short-selling picks go the wrong way, rising 17%.

For the past two decades we've made an annual ritual out of asking a few brave investment professionals to go on the record with one stock to own or to short. Twelve offer up a buy, five a short-selling candidate. Winners get a return invitation. During the previous five rounds, the bears have done well on the whole, averaging a return 23 points worse than the market. As for the bulls in the prior five years, their picks have lagged the market by 4 points.

So what went wrong in 2002? For the bulls, the rebound in technology stocks never quite showed up the way a few thought it might. Nor did one analyst's bullish call on Enron help matters. For the bears, expectations of disaster for the likes of Eastman Kodak didn't quite happen.

There were a few standouts. The star bull: Jean-Marie Eveillard, a fund manager with First Eagle SoGen Funds. Eveillard bet on Security Capital, a holding company for real estate investment trusts. In May that firm was acquired by GE Capital. The deal entitled Security Capital shareholders to cash and fractional shares of ProLogis, an Aurora, Co.-based REIT. Eveillard's pick was up 41% over the 12 months to Oct. 31.

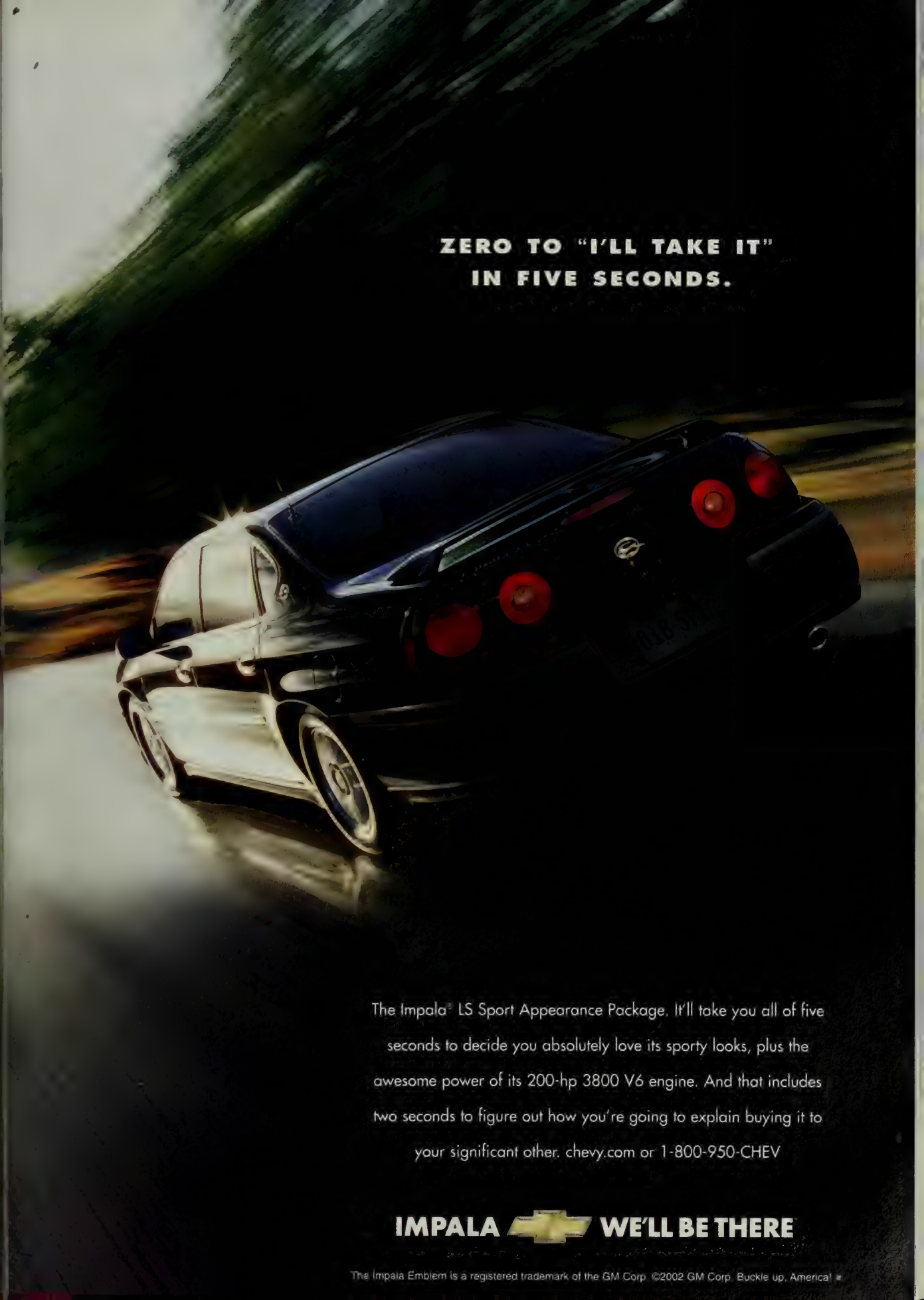
For 2003 Eveillard returns with Tyco International, maker of things ranging from electrical components to security systems—

## May the Force Be With Them

Our intrepid stock pickers—seven returning and ten joining up—try their hands at beating the market for the coming year. Legg Mason's Richard Cripps is the hardiest veteran, with four years in the contest.

| Name/affiliation | Years in contest | Stock | Price | Buzz |
|---|---|---|---|---|
| **Richard Cripps**/Legg Mason | 4 | Smithfield Foods | $15.54 | will rise with commodity prices |
| **Anna Dopkin**/T. Rowe Price | 2 | Safeco | 35.56 | turnaround story continues |
| **Philip Dow**/RBC Dain Rauscher | 1 | Medtronic | 44.80 | defensive and historically cheap |
| **Richard Driehaus**/Driehaus Capital Management | 1 | Nextel Communications | 11.28 | Ebitda up, leverage down |
| **Jean-Marie Eveillard**/First Eagle SoGen Funds | 3 | Tyco International | 14.46 | valuable individual businesses |
| **Grace Keeney Fey**/Frontier Capital Management | 3 | L-3 Communications | 47.00 | defense/security tech is timely |
| **Sandi Gleason**/Kayne Anderson Rudnick | 2 | Orthodontic Ctrs of America | 9.54 | oversold; promising market |
| **Joseph Kalinowski**/Ehrenkrantz King Nussbaum | 1 | Baxter International | 25.02 | cheap; good results could surprise |
| **Susan Kalla**/Friedman Billings Ramsey | 1 | AT&T | 13.04 | will pick up WorldCom customers |
| **Christopher Wolfe**/JPMorgan Private Bank | 1 | Kroger | 14.80 | a steal at ten times trailing profits |
| **Thyra Zernusen**/ABN AMRO Funds | 3 | Andrew Corp. | 8.60 | nice balance sheet; insider buying |
| **Joseph Zock**/Capital Management Associates | 1 | Cendant | 11.50 | more travel as economy recovers |
| **SHORT-[illegible]** | | | | |
| **Patrick A[illegible]**/[illegible] Management | 1 | Starbucks | 23.84 | oversaturated concept; pricey |
| **Patricia Co[illegible]**/[illegible] Partners | 1 | Omnicom Group | 57.63 | unrealistic profit forecasts |
| **Frederick Hickey**/High Tech Strategist | 1 | Intel | 17.30 | excess inventory; high P/E |
| **Bernie Schaeffer**/Scha[illegible] Investment Research | 1 | Pfizer | 31.77 | generics threat and too many bulls |
| **Martin Weiner**/Comstock Partners | 3 | KLA-Tencor | 35.61 | cap-ex falling for chip business |

Prices as of Oct. 31. Participants or their firms may [illegible] stocks. *Source: FT Interactive Data via FactSet Research Systems.*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## A Year Worth Forgetting

Collectively, neither bulls nor bears distinguished themselves over the past 12 months. As a group, the shorts saw their picks rise an average 17%, while longs mimicked the market's 18% drop.

| Name/affiliation | Ticker | Stock | % change[1] |
|---|---|---|---|
| **Richard Cripps**/Legg Mason | CSC | Computer Sciences | −5 % |
| **Anna Dopkin**/T. Rowe Price | SAFC | Safeco | 14 |
| **David Elias**/Elias Asset Management | JPM | JPMorgan Chase | −43 |
| **Kurt Von Emster**/MPM Capital | REGN | Regeneron | −32 |
| **Jean-Marie Eveillard**/First Eagle SoGen Funds | SCZ[2] | Security Capital | 41 |
| **Grace Keeney Fey**/Frontier Capital Management | GIS | General Mills | −12 |
| **Sandi Gleason**/Kayne Anderson Rudnick | SCOR | Syncor International | 21 |
| **Subodh Kumar**/CIBC World Markets | INTC | Intel | −33 |
| **Michael Mauboussin**/Credit Suisse First Boston | ENRNQ | Enron | −99 |
| **Wendy Trevisani**/Thornburg Investment Management | ET | E-Trade | −34 |
| **Byron Wien**/Morgan Stanley Dean Witter | ORCL | Oracle | −28 |
| **Thyra Zerhusen**/ABN AMRO Funds | UIS | Unisys | −7 |
| **SHORT-SELLERS** | | | |
| **Timothy Ghriskey**/Ghriskey Capital Partners | NSRGY | Nestlé S.A. | 1 |
| **William Seale**/ProFund Advisors | CCL | Carnival | 15 |
| **Cengiz Searfoss**/West Broadway Partners | EK | Eastman Kodak | 23 |
| **Martin Weiner**/Comstock Partners | AMAT | Applied Materials | −19 |
| **Stephen Worthington**/Barbary Coast Capital Mgmt | PHSY | PacifiCare Health System | 62 |

[1]From Nov. 1, 2001 through Oct. 31, 2002; split- and spinoff-adjusted. [2]Security Capital acquired by GE Capital, May 2002. SCZ shareholders received $20.80 in cash plus 0.23 shares of ProLogis Trust (NYSE: PLD). *Source: FT Interactive Data via FactSet Research Systems.*

and bedeviled by accounting questions and former chairman Dennis Kozlowski's indictment. "A controversial company," he muses, "but real businesses." Eveillard says Tyco, if carved up and sold to other companies, would be worth $25 a share.

A year ago Sandi L. Gleason, a portfolio manager with Los Angeles' Kayne Anderson Rudnick, chose Syncor International, a health care outfit specializing in the use of radioactive materials for treatment and imaging. In June Cardinal Health announced it would buy Syncor. This purchase has yet to be completed, but her pick shows a 21% gain.

Gleason now likes the looks of Orthodontic Centers of America, which provides back-office services to orthodontists. She says investor qualms about litigation and accounting methodology have pushed the stock down too far, particularly given growing demand for the fixing of crooked teeth.

Only one bear is back. Martin Weiner, comanager of the $140 million Comstock Capital Value Fund, deemed Applied Materials too richly priced last November. Since then the stock is off 19%. Now Weiner finds KLA-Tencor, another semiconductor equipment maker, also overpriced at 57 times expected earnings for its fiscal year ending June 2003.

What about the new recruits? On the short side Patrick Adams, manager of the $55 million Choice Long-Short Fund, thinks Starbucks' 5,900 stores leave the coffee company little room for expansion. The stock sells for 36 times its expected earnings for 2003; he considers 25 a more appropriate multiple.

Patricia Coronado, portfolio manager with New York's Riverside Capital Partners, targets Omnimedia Group as a short sale, arguing that expectations for the advertising firm's revenues and net profits are stretched. The loss of a big account with Gillette also troubles her, as does the resignation last May of the head of Omnimedia's audit committee.

The editor of the Nashua, N.H.-based *High Tech Strategist* newsletter, Frederick Hickey, says Intel's $115 billion market capitalization is undeserved. He fears the chip giant has too much capacity and inventory, given the dim outlook for its customers in the PC market.

Our last bear, Bernie G. Schaeffer, takes a contrarian tack on Pfizer. He cites big drugs coming off patent, near unanimous "buy" ratings from brokerage analysts and a share price below its 80-month moving average. "In clear bear market territory," Schaeffer says.

The first of our new bulls, Philip S. Dow, director of equity strategy with RBC Dain Rauscher, believes Medtronic will continue to squeeze 13% to 15% profit growth from its medical devices business. "When people are prescribed a pacemaker," he quips, "they don't wait for an economic recovery to get it installed."

Richard Driehaus, who oversees $2.6 billion in assets at Chicago's Driehaus Capital Management, picks Nextel Communications because of the strong operating profits (earnings before interest, taxes, depreciation and amortization) it posted in its September quarter. Driehaus also likes Nextel's declining debt burden and the increasing market share of its Direct Connect service.

The chief investment officer with New York City brokerage Ehrenkrantz King Nussbaum, Joseph Kalinowski, goes for Baxter International, noting that this health care firm has met analysts' profit expectations for eight straight quarters and trades at a discount to competitors.

Susan Kalla, who covers telecom for the Arlington, Va.-based Friedman Billings Ramsey, thinks the WorldCom mess will lead to price stabilization and market-share shuffling in the long-distance business, and that AT&T will benefit.

Christopher Wolfe, U.S. equities strategist with JPMorgan Private Bank, sees a bargain in Kroger, the supermarket chain. Joseph Zock, president of New York's Capital Management Associates, predicts that Cendant, whose brands include Avis and Ramada, will profit from an economic rebound.

For updates on these picks go to www.forbes.com/love. ■

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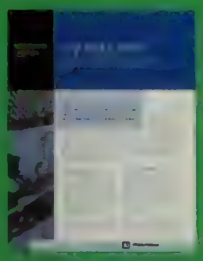

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# SAY A PRAYER

**American Bible Society is a terrific example of how a nonprofit shouldn't operate.**

**BY TOMAS KELLNER**

The latest glossy annual report of the American Bible Society proudly lists the famous money manager Sir John Templeton as a senior trustee. But Templeton left the charity's governing board in 1991, the last time he set foot inside the New York City headquarters of ABS. Templeton—who sponsors a $1.1 million annual religion prize—knew nothing about ABS' current invocation of his name until FORBES called him at his Bahamas home. Sir John says ABS can expect a letter asking that his name be removed.

That may be the least of the difficulties facing this storied nonprofit. The society was founded in 1816 to provide Biblical scripture to anyone who might need it. ABS, not the Gideons, pioneered the practice of putting Bibles in hotel rooms. Now, though, the ABS is trying to fight off irrelevance, competition and the effects of years of misguided policies. Despite income from its ample reserves, it has been hemorrhaging money. Its fundraising is inefficient. Bad business deals have cost it millions of dollars. A recent report by Dun & Bradstreet labels the charity a high credit risk.

Employee morale is dismal. At least five sex and race discrimination claims by employees are pending. Over the last year some ABS insiders have leaked a stream of damaging letters and internal documents to FORBES alleging everything from mismanagement and self-dealing to fraud and even physical abuse against an employee by a top manager.

Presiding over the Bible Society for the past 11 years is Eugene B. Habecker (pronounced "HAH-becker"), 56, a lawyer and former college president. Habecker called a meeting of all 300 employees in mid-October to deny the allegations. "One way to destroy an organization [is] if you only have within your midst people who are unloving critics," Habecker told the gathering.

In interviews with FORBES, Habecker defends his administration, saying fundraising has remained strong, rising by 26% between 1991 and 2001. (That, however, would mean a 4% decline in real terms.) Over the last year the society distributed 2.1 million Bibles and 5.5 million Bible portions. Habecker also says that 71% of ABS employees are women or people of color and that its personnel department investigates every discrimination complaint.

ABS has had trouble making ends meet, running up operating losses in the last two years. In the fiscal year ended June 30, 2001, the latest with available numbers, ABS spent $106 million while taking in only $88 million in donations, Bible sales and investment income. The ABS also lost $88 million from its investment portfolio.

The reserves ($670 million at last report) help, but this stash hasn't been doing too well, either. Over the five years through June 2001 the mix of stocks and bonds, managed by Alex Brown, Scudder, Franklin Templeton and others, has averaged a 10.6% return annualized, against 11.1% for ABS' Callan Customized Benchmark. ABS expects performance to worsen "but not dramatically" in 2002.

Fundraising is inefficient, with a steep 33% of the $36 million in fiscal 2001 donations being dissipated in fundraising. On that scor

## rinking need
## r Scriptures

ident Eugene Habecker has to find
w calling for his Bible society.

## Venerable

The American Bible Society was founded in 1816 at City Hall, in New York City, by such luminaries as New York Governor DeWitt Clinton and writer James Fenimore Cooper. John Quincy Adams was an ABS vice president while he was U.S. president and for many years thereafter. Other well-known trustees or officers in the early years included Supreme Court Chief Justice John Jay; Francis Scott Key, writer of "The Star-Spangled Banner"; and numerous state governors.

Initially, ABS strove simply to supply Bibles—168 million in the U.S. so far—but later expanded to commissioning new biblical editions and translations into what ABS says is 2,300 languages. During the U.S-Mexican War in the 1840s ABS gave copies of the holy book to both Mexican and American forces. During the 1991 Gulf war ABS produced a version for U.S. troops that was bound in fatigue green. Current ABS president Eugene Habecker says there are plans for a new edition if the U.S. invades Iraq.

In 1843 the ABS sold the first-ever charitable gift annuity, a now-popular fundraising device in which a person makes a donation to a tax-exempt entity and gets back a specified annual return for life. One Joseph Keith, of Enfield, Mass., paid $500 for a $30 yearly payout.

Financially the ABS has had its ups and downs. In the 1870s, one ABS history says, a member of its own board of managers publicly declared the nonprofit had "doctored" its financial statements to make it seem poor and to stimulate donations. Wide press attention caused a "substantial" drop in gifts. In 1910 ABS was saved from financial collapse by the timely deaths of supporters whose wills contained hefty bequests. —*T.K.*

ABS is tied for last place on the FORBES list of 200 large nonprofits, where the average fundraising cost is 11%. The ABS explanation: It incurs extra costs because it has to serve a range of denominations, including Roman Catholics, Protestants and Lutherans, while other Bible charities stick to one flavor. ABS insists that every dollar donated to the ABS is used toward the charitable mission. While acknowledging it needs to do a better job, ABS says it has improved its efficiency by eliminating from its solicitation list 155,000 small donors whose average gift was just $3.

Besides spending $12 million on fundraising, the society ran through another $17 million in overhead, leaving only 73% of total spending that goes directly to the worthy purpose, among the lowest on our list. One reason is that the organization has ten managers collecting salaries. However, only four of them are directly involved in the distribution of Bibles.

But then, ABS may be losing its enthusiasm for that ancient mission; after all, commercial publishers like Zondervan and Thomas Nelson manage to do a pretty good job of getting Bibles to people who want them. "Our agenda is not to give people their 26th Bible if they already have 25," says Habecker. So he has shifted focus to programs using the Bible as a learning tool. He has developed literacy programs for youth and the poor. And he has veered off into textbooks, the Internet and video programming.

Yet these diversifications have had troubles of their own. In 1997 the ABS sank $5.3 million into a Pittsburgh company developing Web sites, to be covered with Web advertising, for 330,000 churches. But by 2000 the firm was out of business. ABS bought the corpse for $560,000 and operates it as a free service called Forministry.com. In 1998 ABS paid $1.6 million to Sony Music Entertainment to distribute Kingsley's Meadow and Angel Wings, a cartoon video series based on the lives of Biblical characters. But then Sony sold the distribution rights to these series and other properties for $20 million, giving nothing to ABS. The project has stalled, and ABS has now filed a lawsuit against Sony for a share of the money.

Might there be some embarrassment over the failures? ABS failed to note in its IRS Form 990 filing, as required, that in fiscal 2000 it paid $3 million to Los Angeles-based Grizzard Co. for a direct mail campaign promoting Kingsley's Meadows among other projects. The society now says it will file an amended tax return noting the expenditure.

In 1997 the charity decided to develop a scripture-based literacy program for kids called Phillip's Project. It called for 90 illustrated Bible stories along with CDs and videotapes sold in $159 kits to schools and churches. Habecker says ABS spent only $1.6 million on the project. Five years after conception the project is still in its pilot stage.

Habecker's pay is another sore point. During fiscal 2001, while ABS was laying off 10% of its employees, the board raised Habecker's salary and benefits by 15% to $332,000, including two housing allowances. Last year Habecker's wife, Marylou, started receiving an annual $6,000 honorarium. Chairman Lamar Vest says Manhattan's high cost of living justifies the pay.

The ABS crisis has developed on the watch of a docile board, which includes prominent members of the nation's Christian churches. But hope springs eternal. The board is preparing to launch a $28 million makeover campaign—another likely hit to the endowment—entitled "Reaching for the Soul of America—Reputation, Reading, Revenue." The "critical success factors" identified by internal campaign documents include "move incrementally with prudence," "manage risk carefully" and "share results—good and bad." At ABS, these truly are revolutionary concepts.

*FORBES recommends avoiding—or at least taking a very close look at—nonprofits whose fundraising efficiency fall below 70%. Joining ABS this year in that group on our nonprofits list (fully displayed on the Web at* **www.forbes.com/charities***) are Veterans of Foreign Wars of the U.S., also at 67%, and the U.S. Olympic Committee, at 69%. Nonprofits at or barely above that mark include Disabled American Veterans (70%), Humane Society of the U.S. (71%) and Easter Seals (72%).*

*Twelve nonprofits list 100% fundraising efficiency, some because of large amounts of donated material, which require relatively little solicitation. They are, in alphabetical order: Brother's Brother Foundation, Children's Hospital Medical Center, Children's Hunger Fund, Christian Aid Ministries (whose head, Nolan Byler, drew no salary), Direct Relief International, Gifts in Kind International, Kids in Distressed Situations, National Cowboy & Western Heritage Museum, Program for Appropriate Technology in Health, Public Broadcasting Service, RBC Ministries and Tides Foundation.*

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**ose Jewelers:** Patchogue, NY, South Hampton, NY • **Rottermond Jewelers:** Milford, MI • **Thoenigs Fine Jewelry:** Jackson Hole, WY
**Wick & Green Jewelers:** Asheville, NC • **Swiss Watch & Jewelers:** Alhambra, CA, San Gabriel, CA

# GOOD WORKS

Investigate before investing your donations in a charity.

BY DIRK SMILLIE AND WILLIAM P. BARRETT

Our annual survey of the nation's 200 major charities has found what every investor knows: Don't look to investments to bail you out. After years of posting big gains, portfolio losses have made the 200 major charities much more reliant upon gifts. Average donor dependency—the share of a nonprofit's surplus coming from contributions as opposed to sale of goods or investment performance—rose sharply from 75% to 94% this year.

For each nonprofit, we calculate two other key financial ratios as well as the direction of the trend from the previous year. Charitable commitment details how much of the money a nonprofit spent went directly for its stated charitable purpose, as opposed to management, overhead or fundraising. This year's average was 84%, same as last year. Fundraising efficiency shows the percentage of funds raised from gifts that remains after subtracting fundraising expenses. This year's average is 89%, also unchanged. For all three ratios, a higher number suggests better use of your contributions.

The survey of the 75 largest charities, as judged by gifts, start below. The complete list of the 200, including far more data on each—such as Web link and top salary—is online at www.forbes.com/charities.

## What's the Charity Doing With Your Money?

| Name/headquarters | Total revenues ($mil) | Private support ($mil) | INDEXES AND TRENDS: Charitable commitment[1] | Fundraising efficiency[2] | Donor dependency[3] |
|---|---|---|---|---|---|
| Alzheimer's Disease & Related Disorders Assn/Chicago IL | $127 | $113 | 75% ▼ | 80% ● | 94% ▼ |
| American Cancer Society/Atlanta GA | 821 | 770 | 73 ▼ | 81 ▼ | 93 ▲ |
| American Diabetes Association/Alexandria VA | 173 | 132 | 77 ● | 77 ▲ | 98 ● |
| American Heart Association/Dallas TX | 489 | 405 | 73 ● | 75 ▼ | 103 ▲ |
| American Lung Association/New York NY | 167 | 131 | 78 ▼ | 80 ▼ | 102 ▲ |
| American National Red Cross/Washington DC | 2,671 | 691 | 90 ● | 84 ● | 104 ▲ |
| AmeriCares Foundation/New Canaan CT | 464 | 463 | 99 ▲ | 99 ● | 95 ● |
| America's Second Harvest/Chicago IL | 480 | 477 | 99 ● | 99 ● | 100 ● |
| Arthritis Foundation/Atlanta GA | 133 | 122 | 81 ▲ | 86 ● | 106 ▲ |
| Big Brothers Big Sisters of America/Philadelphia PA | 205 | 168 | 79 ● | 90 ▼ | 95 ▲ |
| Boy Scouts of America National Council/Irving TX | 727 | 290 | 87 ▲ | 84 ● | 106 ▲ |
| [illegible] America/Atlanta GA | 998 | 426 | 82 ● | 90 ▼ | 83 ▲ |
| Campus Crusade for Christ International/Orlando FL | 373 | 333 | 85 ● | 91 ● | 106 ▲ |
| CARE [illegible] | 414 | 128 | 91 ▼ | 86 ▼ | 107 ▲ |
| Catholic [illegible] VA | 2,693 | 462 | 89 ▲ | 93 ▼ | 76 ▼ |
| Catholic [illegible] MD | 320 | 110 | 90 ▼ | 81 ▼ | 123 ▲ |
| Children's Miracle Network/Salt Lake City UT | 243 | 236 | 92 ▲ | 97 ● | 86 ▼ |
| Christian Aid [illegible] | 134 | 134 | 99 ● | 100 ● | 96 ▲ |
| Christian Broadcasting Network/Virginia Beach VA | 202 | 197 | 83 ▲ | 90 ▲ | 103 ▼ |
| Christian Children's Fund [illegible] | 124 | 120 | 80 ▲ | 86 ▼ | 107 ▲ |
| City of Hope/Duarte CA | 373 | 158 | 89 ▲ | 90 ▲ | 93 ▲ |
| Cleveland Clinic Foundation [illegible] | 2,608 | 113 | 92 ● | 96 ● | 112 ● |
| Compassion International/[illegible] | 108 | 109 | 81 ● | 91 ▲ | 94 ▼ |
| Covenant House/New York NY | 118 | 104 | 70 ▼ | 77 ▼ | 97 ▲ |
| Dana-Farber Cancer Institute/[illegible] | 264 | 106 | 92 ● | 93 ▲ | 150 ▲ |
| Disabled American Veterans/Cold Spring KY | 104 | 99 | 64 ▼ | 70 ▼ | 96 ▲ |

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| Name/headquarters | Total revenues ($mil) | Private support ($mil) | INDEXES AND TRENDS Charitable commitment[1] | Fundraising efficiency[2] | Donor dependency[3] |
|---|---|---|---|---|---|
| Easter Seals/Chicago IL | $583 | $134 | 84% ▲ | 72% ▲ | 117% ▲ |
| Educational Broadcasting Corp (WNET)/New York NY | 151 | 116 | 77 ▲ | 82 ▲ | 98 ▲ |
| Feed the Children/Oklahoma City OK | 457 | 447 | 87 ▲ | 89 ▲ | 100 ▲ |
| Focus on the Family/Colorado Springs CO | 121 | 111 | 85 ● | 93 ▼ | 99 ▲ |
| Food for the Poor/Deerfield Beach FL | 321 | 283 | 93 ▲ | 94 ▲ | 99 ● |
| Gifts in Kind International/Alexandria VA | 415 | 412 | 100 ● | 100 ● | 108 ▲ |
| Girl Scouts of the USA/New York NY | 690 | 133 | 83 ● | 74 ● | 56 ▲ |
| Goodwill Industries International/Bethesda MD | 1,941 | 287 | 88 ▲ | 97 ● | 82 ▲ |
| Habitat for Humanity International/Americus GA | 690 | 421 | 79 ▼ | 87 ▼ | 67 ▲ |
| Institute of International Education/New York NY | 173 | 164 | 96 ● | 99 ▼ | 95 ▲ |
| Jewish Federation of Metropolitan Chicago/Chicago IL | 99 | 111 | 85 ▼ | 90 ▼ | 127 ▲ |
| Junior Achievement/Colorado Springs CO | 127 | 110 | 72 ▼ | 88 ▲ | 90 ● |
| Juvenile Diabetes Research Foundation Intl/New York NY | 144 | 138 | 87 ▲ | 91 ● | 121 ▲ |
| Leukemia & Lymphoma Society/White Plains NY | 151 | 149 | 76 ● | 83 ▼ | 99 ▲ |
| Lutheran Services in America/Baltimore MD | 7,655 | 1,745 | 93 ▲ | 99 ▲ | 100 ▲ |
| Make-A-Wish Foundation of America/Phoenix AZ | 130 | 125 | 79 ● | 87 ● | 98 ● |
| MAP International/Brunswick GA | 146 | 144 | 99 ▲ | 99 ● | 92 ▼ |
| March of Dimes Birth Defects Foundation/White Plains NY | 205 | 201 | 75 ▼ | 82 ▼ | 105 ▲ |
| Mayo Foundation/Rochester MN | 4,094 | 140 | 91 ● | 96 ▲ | 149 ▲ |
| Memorial Sloan-Kettering Cancer Center/New York NY | 1,088 | 258 | 94 ▲ | 93 ▲ | 107 ▲ |
| Metropolitan Museum of Art/New York NY | 650 | 498 | 85 ▼ | 99 ▲ | 19 ▲ |
| Metropolitan Opera Association/New York NY | 275 | 176 | 88 ▲ | 93 ▲ | 54 ▼ |
| Muscular Dystrophy Association/Tucson AZ | 152 | 143 | 75 ● | 82 ▼ | 92 ▲ |
| Natl Assn for the Exchange of Industrial Resources/Galesburg IL | 141 | 129 | 99 ▲ | 99 S | 106 ▲ |
| National Multiple Sclerosis Society/New York NY | 156 | 151 | 77 ● | 83 ▼ | 100 ▲ |
| Nature Conservancy/Arlington VA | 547 | 472 | 87 ▲ | 89 ▼ | 147 ▲ |
| Planned Parenthood Federation of America/New York NY | 677 | 192 | 82 ▲ | 80 ▼ | 99 ▲ |
| Public Broadcasting Service/Alexandria VA | 542 | 222 | 96 ● | 100 ● | 112 ▲ |
| Salvation Army/Arlington VA | 1,883 | 1,391 | 83 ● | 93 ▲ | 130 ▼ |
| Samaritan's Purse/Boone NC | 150 | 146 | 90 ▲ | 96 ● | 93 ▲ |
| Shriners Hospitals for Children/Tampa FL | -232 | 279 | 93 ▲ | 96 ▲ | 357 ▲ |
| Smithsonian Institution/Washington DC | 349 | 157 | 81 ● | 92 ▼ | 137 ▲ |
| St Jude Children's Research Hospital/Memphis TN | 352 | 286 | 79 ● | 84 ▲ | 95 ▲ |
| Trinity Broadcasting Network/Santa Ana CA | 218 | 163 | 79 ▼ | 91 ● | 57 ▼ |
| Trust for Public Land/San Francisco CA | 471 | 106 | 97 ▼ | 98 ▼ | 92 ▼ |
| United Cerebral Palsy Association/Washington DC | 483 | 119 | 88 ● | 90 ▲ | 87 ▲ |
| UJA/Federation of New York/New York NY | 219 | 167 | 73 ▼ | 81 ▼ | 68 ▼ |
| United Jewish Communities/New York NY | 366 | 233 | 97 ● | 99 ● | 98 ▼ |
| United Negro College Fund/Fairfax VA | 156 | 170 | 85 ▲ | 91 ● | 110 ▲ |
| United States Fund for UNICEF/New York NY | 199 | 190 | 85 ▲ | 89 ▲ | 96 ▲ |
| United Way of New York City/New York NY | 128 | 105 | 86 ▼ | 87 ▼ | 106 ▲ |
| United Way of Tri-State/New York NY | 109 | 107 | 92 ▼ | 94 ▼ | 100 ▼ |
| WGBH Educational Foundation/Boston MA | 190 | 158 | 84 ● | 91 ● | 105 ▼ |
| Wildlife Conservation Society /Bronx NY | 311 | 222 | 87 ▲ | 97 ▲ | 15 ▼ |
| World Vision/Federal Way WA | 525 | 398 | 84 ▲ | 86 ● | 101 ▲ |
| Wycliffe Bible Translators/Orlando FL | 110 | 108 | 84 ▼ | 95 ● | 100 ▲ |
| YMCA of the USA National Council/Chicago IL | 4,123 | 791 | 81 ● | 91 ▼ | 56 ▲ |
| Young Life/Colorado Springs CO | 155 | 126 | 82 ▲ | 91 ▲ | 92 ▲ |
| YWCA of the USA/New York NY | 646 | 162 | 87 ● | 93 ● | 61 ▲ |
| **AVERAGE FOR ALL 200** (including those at www.forbes.com/charities) | | | 84 ● | 89 ● | 94 ▲ |

All figures are for the latest available fiscal year [illegible] skewed due to consolidating data of national and affiliated groups, rounding or incomplete information. [1]Charitable service percent of total expenses. [2]Percent of private sup[illegible] after fundraising expenses. [3]Percent of private support remaining after surplus. ▲ Ratio increase from previous period. ▼ Ratio decrease from previous period. ● No change [illegible] available data. *Sources: IRS Form 990, annual report or statement of individual charities; www.guidestar.org; www.ministrywatch.org; Chronicle of Philanthropy; www.give.org; Minnesota Attorney General's Office.*

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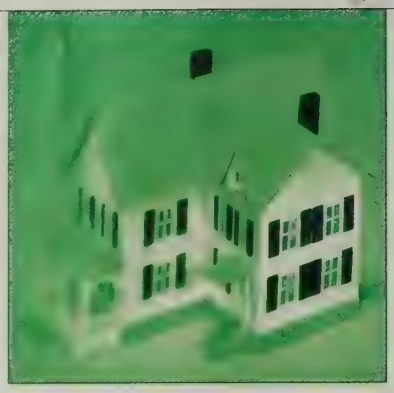


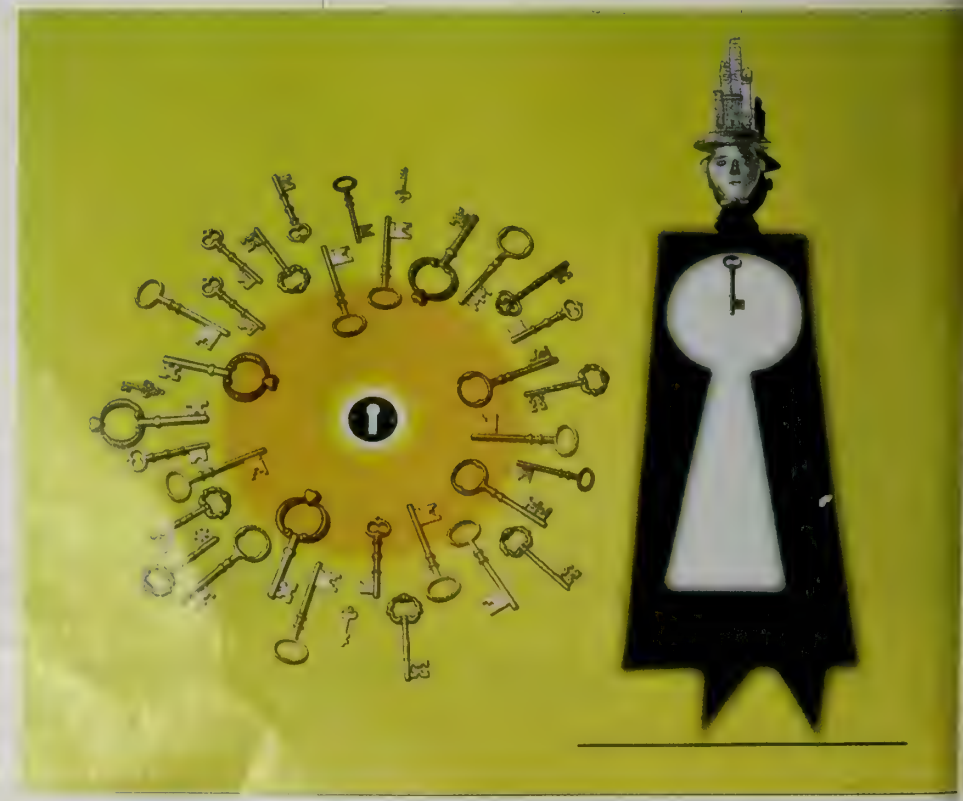
# A LANDLORD'S TALE

**Apartment buildings can make good investments—if you don't mind the constant upkeep, sudden vacancies, deadbeat tenants, lustful janitors ...**

**BY BRETT NELSON**

In 1996 Geometry Group, a Manhattan-based asset manager, paid $3.3 million for a fully leased, 92-unit apartment complex in rural Connecticut. It was a classic fix-and-flip deal: The two-bedroom units had 20-year-old appliances; the landscaping was shabby; abandoned cars dotted the parking lot. Nothing, in short, that a little capital, capable management and demand from the new casinos nearby couldn't cure. The property was a small chunk of Geometry's $1.5 billion in assets (mostly in stocks and bonds), but enough to get its hands dirty in real estate.

Dirty, indeed. After shelling out $4,000 a unit on renovations, the firm raised rents 21%, to $725. Tenants bolted, driving the vacancy rate to 20%. Then the leasing agent sued, claiming the janitor had sexually harassed her. Next came a dry year, when the well-water filters clogged with iron deposits, turning tap water brown, and septic waste leached out of a nearby field. Geometry had to spend $50,000 on new pumps, filters, water heaters and a lot of bottled water. When it sold in 2000, the deal's projected 30% annualized return on equity had shrunk to 12.5%.



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# Tips

## On Buying

BE DILIGENT. Hire a lawyer who knows contracts. Count on sellers not coming clean about all the glitches. (Environmental and engineering surveys cost $3,000 to $5,000.) Require sellers to maintain the property during the closing period. Think you have a handle on capital expenditures? Add more cushion. Be aware of zoning laws that hamper renovation.

INVEST LOCALLY. "If it's not in your backyard, don't do it," says Jon Fosheim of Green Street Advisors. To get an edge, Burtis Dolan has his janitor pound pavement. A lead to a potential seller earns $100; a sale bags $1,000. "It's good for the seller, too," says Dolan. "He doesn't have to pay a broker 5%."

CONSIDER THE ALTERNATIVE. Instead of buying your own building, you could buy a share in a pool of professionally managed properties. That's called a real estate investment trust. There's a little vigorish raked off the top every year for the managers, but at least the price is right—on average, shares go for 3% less than the liquidating value of the pool, says Fosheim.

## On Owning

GET HELP. Contract out day-to-day management—unless you like getting that angry call at 2 a.m. from a tenant with a clogged bathtub. Cost: between 4% and 8% of gross income. (Janitors and leasing agents are extra.)

PROTECT YOURSELF. Hold property in a limited liability company; if the boiler blows up, tenants can't go after your house. (Caveat: Some states don't allow single-owner LLCs.) Also get lessor's insurance. Do thorough credit checks on prospective tenants. Landlord Services in Rhode Island charges $10 a head.

## On Selling

SWAP. Defer capital gains taxes with a Section 1031 exchange. To qualify, you have to find a similar building within 45 days of the sale and close within the next 135 days. If speed is critical, try a "reverse" exchange: An intermediary (a trust company) buys the new property now, then swaps with you after the sale. The downside: hefty transaction fees, up to 3% of the sale price.

CONVERT A CONVERT. Apartment buildings can fetch perhaps 30% more when carved into condominiums. But beware: Condo dealers get taxed at the ordinary-income rate. —*B.N.*

Despite its pitfalls, owning real estate is back in vogue. Before the Tax Act of 1986, most apartment deals were bought by syndicates of investors. They could use paper losses occasioned by depreciation charges to shelter other income. The new law pretty much eliminated the syndicate investors because it banned "passive" losses on investment property. Then the explosive 1990s equities market made real estate returns look pathetic by comparison. Now, confronted by capital losses on their stocks and anemic coupons on their bonds, investors have a new respect for real estate.

Over the last 12 months the average pretax return on unmortgaged apartment buildings (appreciation plus rent less expenses) has been 7.8%, according to data compiled by Jeffrey Fisher, research director at the National Council of Real Estate Investment Fiduciaries, on 800 properties managed on behalf of big institutions. Smaller investors typically take on debt to do deals. If they don't overdo the debt, they can get a nice tax benefit from the depreciation. (A heavily leveraged building is likely to leave the owner with an unusable passive loss on his tax return.) Assuming the buyer borrows 75% of the purchase price at an interest rate of 6%, the pretax return on equity is more like 13%, and the depreciation would make much of the return tax free.

Pros like Geometry often look to buy cheap, renovate and sell for a quick profit. Less adventurous souls seek a steadily rising income. Burtis Dolan, 44, is in the second camp. In April 2000 he sold his half of a family-run staffing business and became a landlord. He now owns two apartment buildings on Chicago's North Side and will close on a third this month.

Dolan hunts for properties with at least 15 units, large enough to support an on-site janitor. He sticks to a few neighborhoods, preferably those where apartments are being converted to condominiums. "That means other people are investing their own cash too," he says. Few deals pass muster—he wants a flow of rental income, net of operating expenses, that is at least 20% bigger than his mortgage payments.

Here's the math on his latest deal for a building with 16 one- and two-bedroom units, all sporting new cabinets, windows and leases running through April at monthly rents from $700 to $1,100. Dolan would put down a third of the $1.5 million purchase price and borrow the rest at 5¾% amortized over 25 years, giving a annual mortgage payment of $75,900. He assumes property taxes and other operating costs will eat up 40% of the $175,000 annual rent roll. Thus he should have in $29,100 on $500,000 of equity, for a cash-on-cash return of 5.8%.

That doesn't sound terrific, but there are four things that boost the return. One is that Dolan's mortgage payment includes some paydown of the principal, building his equity even if the property doesn't appreciate. The next is that the property probably will appreciate. Third is that he should be able to raise rents over time. Fourth is that the $54,500 depreciation charge (straight line over 27½ years) wipes out Dolan's taxable income. The depreciation will give rise to an inflated capital gain for tax purposes when he sells, but that event is presumably years away and the recaptured depreciation is taxed at only 25%.

Now for the downside. Real estate is illiquid, with stiff selling costs. Some tenants are bums. And the depreciation could turn out to be real, not just on paper—in which case your maintenance budget may fall far short of covering a new facade or pipes or other costly upgrades. You can make decent money, but don't have smoke in your eyes.

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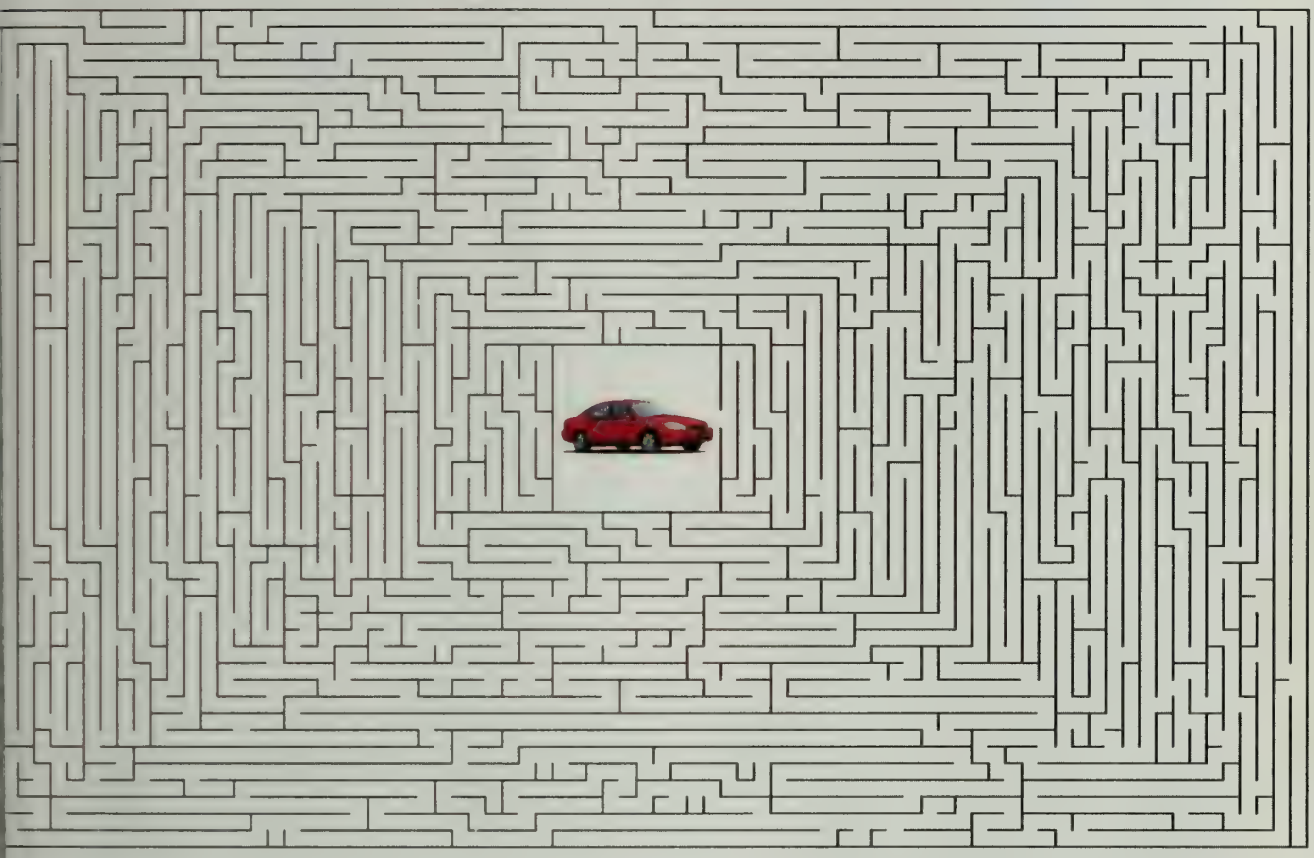

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Market timers: Matt and Marc Silverman.

# MOVING ON

It's like selling short: You could unload your house and buy back something just like it two years from now. **BY CARRIE COOLIDGE**

Once bitten, twice shy. Marc Silverman didn't get out of equities at the top of the market and watched his retirement savings dwindle. He doesn't want to make the same mistake with his real estate.

Over the past year the Tampa, Fla. resident saw homes in his neighborhood sell for considerably more than what they went for a few years earlier. To the 48-year-old lawyer, whose life partner, Matthew Richards Silverman, is a real estate agent that smelled like a market top. In mid-October he put his three-story, 3,000-square-foot Charleston-style home on the market for $895,000. "We thought it was time to pull out the equity from the house and secure it in some way," says Marc Silverman.

What makes Silverman's decision more than a neatly

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## The Bubble Index

Headed for a fall will most likely be cities where median home prices are quadruple median income—or more. Cities to watch? Boston, Los Angeles, New York and San Francisco.

| | MEDIAN HOME PRICE/MEDIAN INCOME | | | | |
|---|---|---|---|---|---|
| Metro area | 1980 | 1990 | 2000 | 2002 (2Q) | Relative affordability |
| Atlanta GA | 2.2 | 2.1 | 2.1 | 2.0 | affordable |
| Boston MA-NH | 3.5 | 3.3 | 5.0 | 5.0 | expensive |
| Chicago IL | 2.4 | 2.5 | 2.6 | 2.7 | moderately affordable |
| Dallas TX | 2.7 | 2.2 | 2.0 | 2.0 | affordable |
| Detroit MI | 1.7 | 1.8 | 2.2 | 2.2 | affordable |
| Houston TX | 2.4 | 1.8 | 2.0 | 2.2 | affordable |
| Los Angeles-Long Beach CA | 4.7 | 5.5 | 4.2 | 5.0 | expensive |
| New York NY | 3.2 | 4.6 | 4.1 | 4.7 | expensive |
| Philadelphia PA-NJ | 2.5 | 2.6 | 2.1 | 2.1 | affordable |
| San Francisco CA | 4.1 | 5.3 | 6.0 | 5.6 | very expensive |
| Washington DC-MD-VA-WV | 3.1 | 2.8 | 2.2 | 2.6 | moderately affordable |

*Sources: Freddie Mac; Housing & Urban Development; Economy.com.*

timed home sale is that he is effectively shorting the real estate market—and getting a capital gains tax break whether he is successful or not. He and Matthew plan to wait until prices fall before buying a new home (renting an apartment in the meanwhile). "It's a gamble, but we couldn't see the house increasing in value much more than it is worth now," Silverman adds.

Maybe it's time to roll the dice on home prices—with a bet on a price decline. Residential real estate values have risen in just about every large city around the country, especially at the high end. According to Amy Crews Cutts, principal economist at Freddie Mac, they are due to come down again in several housing markets. In Boston, Los Angeles and San Francisco the median home price has increased to more than five times the median household annual income—double the historical average for the U.S. *(See table above.)*

"Wealthy people can always buy down, but it's very hard for people to buy up," says Cutts. "There's going to be a lot less demand for expensive homes in this recession." Says real estate agent Jane Spector of Tampa, Fla.-based Smith & Associates, an affiliate of Sotheby's International Realty: "I am advising many of my clients to sell now and buy later." It's self-serving advice—a home broker picks up a 6% commission on a round-trip trade—but it may be good advice.

There's a potential tax benefit to trading in and out. The 1997 tax law excludes from capital gains tax the first $500,000 of profit that a couple makes on the sale of a home. (Singles get a $250,000 exclusion.) The gimme can be claimed once every two years. So a serial home trader can accumulate a nice pile of untaxed profit. A couple who stay put for 20 years, though, get only one $500,000 exclusion. (If you or your spouse has lived in a home for less than two years, the rules start to get tricky. See Internal Revenue Service Publication 17 for details.)

"People are wise to take advantage of this if they need the money for something else, like retirement," says Blaine Dunn, a fee-only certified financial planner in Winchester, Va. "If you are thinking about moving anyway, do it while the law is in your favor, because who knows how long the tax exemption will be around."

Marc Silverman will trouser all of his $168,150 capital gain if his house sells for its asking price of $895,000. His bet is that he will be able to get a similar property at a lower price sometime in the next few years. He's going to keep the cash in a low-return money fund while waiting.

As anyone who has done it knows, selling and moving out of a house is a hassle. But the sell-and-hold-off-buying strategy makes sense for big-city empty-nesters. It can also be a good idea for someone contemplating a move for the opposite reason: lack of space.

This was the case of a 39-year-old Manhattan-based financial services executive and his 34-year-old wife who felt they had outgrown the 1,500-square-foot apartment they bought for $385,000 seven years ago before they had two children.

They listed their Upper East Side triplex in early September at an asking price of $1,100,000. Within a week they received multiple bids before selling it for $1,250,000. Thanks to the tax exemption, they only have to pay capital gains tax on $290,000 of their $790,000 profit after commissions.

Rather than buy a larger apartment right away, the couple moved ten blocks south into a 2,700-square-foot rental apart

## Two Years On

**Here's how the numbers could work out for the Manhattan couple by late fall 2004:**

| | |
|---|---|
| Proceeds from sale of apartment after commissions, repayment of mortgage loan and capital gains tax, invested in a municipal bond fund yielding 2% tax free | $865, |
| Rent paid ($9,000 a month) | -$216,0 |
| Savings on apartment maintenance (including real estate taxes) not paid ($1,100 a month) | +$26,4 |
| Savings on mortgage payments not made ($1,900 a month) | +$45,6 |
| Lost tax breaks on property taxes ($280 a month) | -$6,7 |
| Lost tax breaks on loan interest ($760 a month) | -$18,2 |
| Cash available for down payment on new home | $696,6 |

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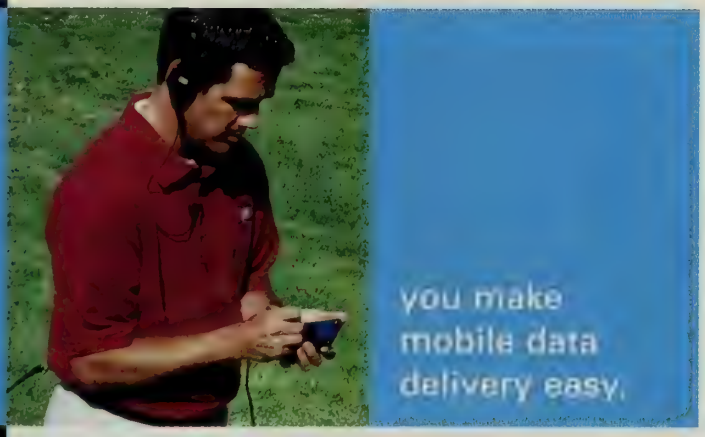


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ment that costs $9,000 a month. Thei plan is to rent for up to two years whil they wait for prices to come down.

They have invested their proceeds i short-term tax-free municipal bonds Like the Silvermans, their money is read ily at hand should a good deal come thei way. If, after two years, they can't afford large enough apartment in Manhattan they will move to New Jersey, where, the believe, their money will go further.

A tax-free profit may be enticing, bu there are risks to this approach—a re minder that catching tax breaks is an in vestment tactic, not a strategy. For on thing, interest rates are low, just below 6% for a 30-year fixed mortgage. It is cheape to finance a home now than at almost any time in living memory. "Real estate pro vides an inflation hedge," says Elizabet Barrett, a financial planner in Plantation Fla. "If we see inflation rise, people ar going to be happy to have locked in an in terest rate of 6% for the next 30 years."

Second, renters can't take advantag of the big tax benefit of owning a hom You don't have to declare as taxabl income the dividend (as it were) you g from a home—the dividend being th rental value of a living space. (It is ofte said that deducting the mortgage inte est is the tax benefit, but this doesn't d justice to the situation. An all-cash buy gets the same tax-free dividend Another, smaller tax benefit is the rig to deduct property tax bills on yo income tax return.

The big unknown is the market ris Will homes decline in value—and t how much—especially in desirab neighborhoods? "Given the high cos of a home transaction—title, escrow a points, plus the rent you pay in t interim—you may break even or lo money while waiting on the sideline warns Robert Bubnovich, a financi planner in Irvine, Calif.

It all comes down to your call on t direction of house prices over the ne couple of years. "In real estate, it's n always about location, location, locatio says Robert R. Prechter Jr., author of *Co quer the Crash* (John Wiley & Sons, 200 "Sometimes it's about timing, timi timing."

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# BACCHUS OUT BACK

**Having a good wine cellar isn't enough. Now wine aficionados have vineyards and their own château labels.** **BY BRENDAN COFFEY**

Wine devotee L William Krause and his wife, Gay, had built a wine cellar of 1,500 bottles ranging from fine Bordeaux first growths to classic California chardonnays. But it wasn't enough. So they tore out the apricot orchard in their Los Altos Hills, Calif. home and planted grapevines. "No sane person would plant one-million-dollar land with vines," says Krause, chairman of telecom equipment maker Caspian Networks and onetime head of 3Com, "but it really got our juices up!"

Homeowners in California and New York—and even Ohio—are turning over the sod and clearing brush to do the same. "In th 1950s swimming pools were the big thing. Now it's vineyards" says Thomas Powers, author of *Vineyard Simple*, a guide to creating a small vineyard. Powers also owns Diablo Vineyard Planting & Management, a Martinez, Calif. firm that plants vineyards and maintains them, servicing 70 homes.

"People want the Napa Valley experience at home," says Ke

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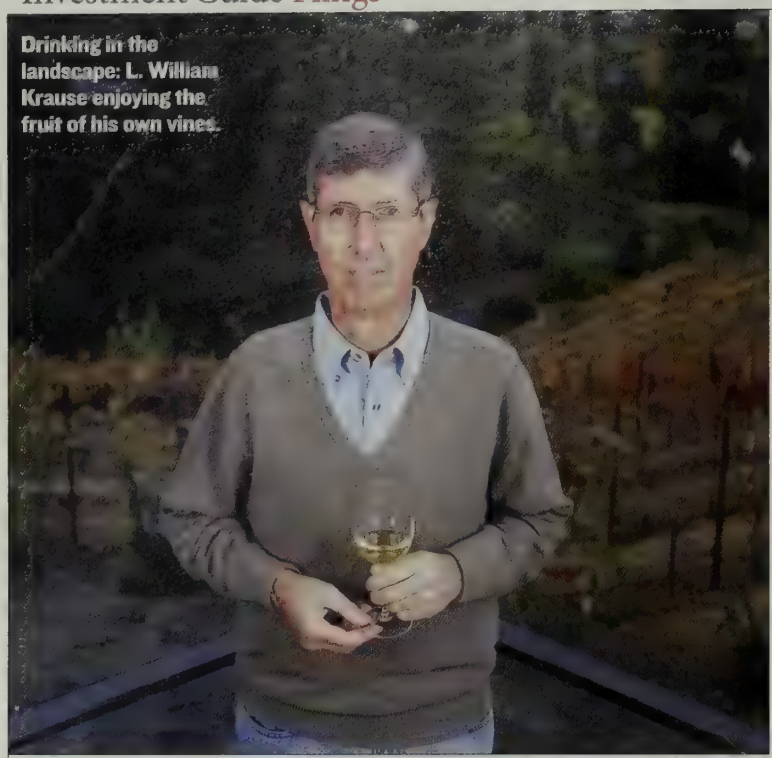

Drinking in the landscape: L. William Krause enjoying the fruit of his own vines.

neth Wornick. Since 1999 his firm, Post & Trellis, has planted 100 vineyards ranging in size from an eighth of an acre to 3 acres in the area between San Francisco and Silicon Valley. To buy a winery in Napa will run to $13 million or so. One in an emerging wine area such as New York's Long Island will still be millions. In Ohio and Missouri you can even get a tax break to start a vineyard.

But it's less about the money and more about the bragging rights. Peggy Fleming, the 1968 Olympic figure skating champion, and her husband, Gregory Jenkins, put an acre under vines at their Los Gatos, Calif. home four years ago. "I love walking among the vineyards. It's added so much to our lifestyle," she says.

The pair tried their hand at home winemaking years ago, but found the results disappointing. Now, after moving to Los Gatos, they have their vines maintained by a winery 40 miles away, Clos LaChance. The winery, which makes 16,000 cases of wine a year, did the planting and buys their grapes for its own wine. "Just to be one percent of the chardonnay they sell is fun," Fleming adds.

While they don't need to worry about intricacies like pruning the vines, Greg enjoys doting over the plants as a hobby. Fun, too, is the personalized label the couple had a local artist design. It adorns the 20 cases of wine they are buying at a 33% growers' discount from Clos LaChance. They're now having the label made into a flag to fly at the house. The pair will dole out "Jenkins Vineyard" chardonnay to friends and family, and relax sipping it while watching the sunset over their vines.

Grapevines grow from Alaska to Florida, but that doesn't mean they are economically viable everywhere. Once you've found a suitable developer, expect to pay about $150 an hour for an evaluation of whether your land is suitable for wine grapes and which varietals will do best. Climate and soil determine a lot of what can be planted successfully. A cooler climate is better for riesling grapes; hotter, dryer regions suit cabernet sauvignon. If you love chardonnay but your land is better suited to malbec, most de velopers will plant the chardonnay if you insist, bu some will plant only the ideal grape for your conditions

Installing the vineyard costs from $30,000 for a leve acre to $80,000 for a hilly one. That price includes th vines, trellises and irrigation. Installers will maintai and harvest your grapes for $3,000 to $5,000 an acre which involves about three trips a month from mainte nance crews and picking in the fall. Then be prepared t wait. It usually takes four years for vines to yield usabl fruit. You'll end up investing at least $70,000 an acre be fore you see the first drop of juice.

With decent sun, an acre yields 4 tons of grape Older, higher quality vines yield less fruit, but the frui commands a better price. Four tons of grapes shoul produce 2,400 bottles of wine—plenty to drink, cella and give away. But there's a downside to the wine boon The number of acres planted with vines has gone u 16% since 1994, leading to a glut of grapes. That ha driven prices below $2,000 a ton, and to half of that i nontraditional winegrowing states like Oklahoma.

At those prices you barely cover the cost of mainte nance. Add in capitalized costs like land and plantin and you won't be making money anytime soon. "How do yo make a small fortune in the wine business? Start with a large one quips Wornick.

If you're serious about turning a profit, be selective about you grape varietal and plant extensively to lower maintenance cost Economies of scale kick in above 3 acres and accelerate over 10. O a small plot it takes a lot of expensive labor to keep at bay pests lil phylloxera and the Japanese beetle, and afflictions like Pierce's di ease that destroy vine yields. Larger acreages make it cost-effecti to spray pesticides by helicopter, for example (if your neighbo don't object).

A for-profit backyard vineyard lets you write off costs as bus ness expenses against your revenue from the harvest. You can d preciate the vines and cost of installation, and of course deduct t harvesting and maintenance costs and maybe catch a property t break for farmland. What about interest on a mortgage? That is theory a deductible business expense, but often it must be ca talized into the cost of the vines depending on how you lega structure your operation. With a mortgage, you are sure to run net loss that could lead the Internal Revenue Service to decla your venture a nondeductible hobby. In practice, given that ag culture is often unprofitable for many years, the IRS is unlikely hold your feet to the fire immediately on that one. But still, w needs the aggravation?

William Barley, an investor in technology companies, h three-quarters of an acre around his home planted with chardo nay, viognier and merlot vines. Instead of selling his grapes trades them to a winemaker for half the wine the grapes yie which he also helps bottle. "I would never even pretend to r this as a business," he says.

Diablo's Powers gives a simple reason: Having vineyards arou the house is so appealing. "It's landscaping you can drink."

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Portfolio Strategy By Kenneth L. Fisher

# NOT BONDS, BOOKS

The next bursting bubble? Bonds. Folks have flooded into the Treasury market. They are driven by panic in the stock market, mesmerized by a 21-year bull market in fixed income and misled by the mythology that bonds are safe. They aren't. You can get killed by them.

Until people realize that, bond managers will remain the new heroes. Pimco's Bill Gross, arguably the best bond manager of the last three decades, runs what just became the world's biggest mutual fund. For some reason that suddenly qualifies him as a stock market sage. While claiming that anyone who is bullish on equities is self-serving, Gross himself self-servingly suggests that stocks will be disappointing for years while bonds will be okay (although, to his credit, he says that Treasurys are fairly priced and their big bull market mostly over).

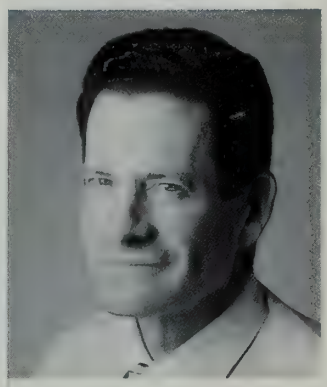
The bond bull market of 1981-2002 was quite extraordinary. Long-term Treasury rates collapsed from 15.8% to 4%. You won't see that again, ever. On the contrary: Interest rates are destined to climb some of the way back up. And why shouldn't bonds get a bear market? If a 20-year stock run-up could lead to the last 3 years, why not ditto with bonds now? How much lower can yields fall while globally central banks print money at 5% to 10% annual rates and economies grow at 2% rates?

Sooner or later bondholders will demand an aftertax coupon exceeding inflation. If the real aftertax return is to be, say, 2%, and if inflation is 4%, and if your tax rate is 25% (it's probably higher), you need an 8% coupon on your long Treasury. That's just about double where long rates are now.

**If a 20-year stock run-up could lead to the last 3 years, why not ditto with bonds now?**

Treasurys are safe? Do the math. If over the next year the yield on long Treasurys climbs four percentage points from where it is now, your total return on such paper will be -40%. That is nearly as much as stocks fell since March 2000. I can't promise you that Treasury yields will double, but I can say the bond market won't be pretty over the next few years. As economies finally pick up some steam in 2003 and 2004, inflation fears will renew and the bubble-bursting will begin. Once the prick starts it will be steady and fast until all the hot air arguing for bond safety is fully dissipated and turned into cold fear.

Do not forget: Inflation is a creature of politics, and politicians never lose their lust to spend money. Yours. You know the



old folk etymology of "politics (Greek scholars, please don't write in with corrections)—tha the word comes from "poli, meaning many, and "tics, meaning small blood-suckin creatures. The blood is mone printed by central bank chair men. Ours, revered as he is, h getting old and has to wor hard to get the reappointmen he covets. President Bush ca stall through summer 2004 his decision to reappoint Greenspa or not. That hinges, despite what you may think, on whethe Greenspan motivates our Fed to be adequately accommodatin to give Bush a suitable economic backdrop for reelection. I pre dict that Greenspan will so motivate the Fed.

You will find few five-year periods in Treasury history with out a severe uptick in rates somewhere. Yet usually those bon bear markets saw stocks fare pretty well, particularly when the were preceded by a stock bear market. We just had a doozy of stock correction. What to do? One approach is to take some your money out of bonds and find stocks with better over yields. By "yield" here I mean the earnings yield, or earnin divided by price.

Some good stocks with good earnings yields: integrat oil producer **Amerada Hess** (**53, AHC,** www.hess.com), with 2% dividend yield and a 12% earnings/price ratio; t world's leading inorganic chemical firm, **Dow Chemical** (**2 DOW,** www.dow.com), with a 5% dividend and a next-ye E/P of 7%; ketchup and soup king **H.J. Heinz** (**33, HN** www.heinz.com), with a 5% dividend and an E/P of 8 auto parts wholesaler **Genuine Parts** (**30, GP** www.genpt.com), with a 3.8% dividend and a 7% E/P; a America's largest department store chain, **May Departme Stores** (**22, MAY,** www.maycompany.com), with a 1% di dend and a 10% E/P.

Christmas approaches. A great gift for investor frien is Robert Menschel's new *Markets, Mobs & Mayhem* (Jo Wiley & Sons, $25). While not written for this purpose, detailing of how panics of all forms end can help you see w stocks will do fine in the next few years.

The best older book I read this year is Thomas Gilovic *How We Know What Isn't So* (Free Press, 1991, $17). In sim English he exposes the cognitive traps that cause misperc tions of reality, which are rampant in markets.

Forbes.com | Kenneth L. Fisher is a Woodside, Calif.-based money manag Visit his home page at www.forbes.com/fisher.

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Fixed-Income Watch By Richard Lehmann

# WHAT IF RATES SPIKE?

It's hard to get excited about bonds when interest rates are already at record lows and are likely to rise once the recovery shows up. I know—we've been expecting this recovery for a while now. A year ago seers were talking about how rates and the economy would rise in 2002. That didn't happen, so 2002 will be the third year in which fixed-income securities outperform stocks. But this state of affairs will not last forever. A wise fixed-income investor is thinking about what a rise in interest rates will do to a portfolio. The smart course of action is to diversify out of Treasurys into junk bonds and convertible preferreds.

Junk bonds are currently paying inordinately large yields because of good old-fashioned fear, in this case more about a second Iraq war than about the economy. A junk-yield spike happened in the last Gulf war, then cleared up quickly once the shooting stopped.

Yields on junk bonds and preferreds have not been this high (relative to Treasury yields) since 1991. Bargains are easily found. Take Xerox Credit Corp., the finance arm of the beaten-down copier company. While Xerox may be suffering from accounting irregularities and slipping market share, the company is not going bust. I like the credit sub's 7.2% bond, due Jan. 17, 2012 and yielding 13.6% to maturity at the current price of 67 (that's $670 for a $1,000 face-value bond).

Crown Castle International is a worldwide communications tower operator. Wireless carriers, Crown's customers, are all slogging through slow subscriber growth. Yet Crown Castle has the resources to wait it out. The company has a 10.75% senior note due 2011, which at 81 yields 14.7% to maturity.

**Treasurys would be killed by a spike in interest rates. Protect yourself. Move some money into junk bonds and converts.**

The other place to be for 2003 is in preferred stocks and preferreds that convert, usually at the option of the holder, into common stock. Now, most are out of the money, meaning that the value of the underlying common is significantly less than that of the convertible. The beauty of converts is they pay a tidy cash return while you're waiting for the common to finally rise and make the conversion worthwhile. The reason to invest in them now is that a strengthening economy, by bringing on improving stock prices, will offset any negative from rising interest rates. And what if the common never recovers enough to make conversion worthwhile? Then you won't do as well as you expected, but still

the convert has considerab value as a pure fixed-incom instrument.

In my Apr. 15 column I re ommended staying away fro convertible bonds and stickin with convertible preferreds. Tl preferreds are easier to trad and usually have better yiel and lower conversion premiur (that's the amount by which tl convertible's price exceeds tl underlying common's value). My advice remains the same.

That said, there are interesting bond-preferred hybri among straight preferreds and converts that are worth a loo These securities are called "trust preferreds" because the pr ferred shares are backed by the issuing company's bonds he in trust. So you get the extra protection of ranking higher in t credit pecking order while keeping the pricing and tradi advantages of a preferred.

The Great Atlantic & Pacific Tea Co., that venerable sup market chain, is sickly, but I think it can keep up its interest pa ments. A&P has a preferred (GAJ) that is backed by a 9.4% sen bond maturing in 2039. At a current price of $15, the preferr yields 15.3%.

Other, more pedestrian preferreds have a lot going themselves, too. You can get some good yields amo faded blue chips, like Ford Motor's 6.5% $50 converti preferred (FPS), which trades at $37. Ford's common l fallen from the mid-30s last year to a recent $9. You h until 2032 to convert into 2.82 common shares. Wh waiting for the stock to recover, you can joyfully rake i decent 8.8% yield.

I also like defense contractor Raytheon's 8.25% p ferred (RTN), which at $51 yields 8.1%. Known for its el tronics gear (radar, sonar, surveillance) and miss (Patriot, Hawk), Raytheon is benefiting from the milit buildup, of course.

A negative is that this particular Raytheon security mandatory convert, which means that at its May 2006 con sion date you get stock, not cash. A lot of folks don't like t feature. Raytheon compensates for this by promising to pay more common shares if they're trading below $27.50 in M 2006 (they now go for $28 per share). Then you would get shares. At any common price between $27.50 and $33.55, get $50 in common shares; above $33.55, you get 1.5 shares

Forbes.com | Richard Lehmann is editor of the *Forbes/Lehmann Income S rities Investor*. Visit his home page at www.forbes.com/lehn

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# New Wrinkle in t

## Three doctors say low-level light can improve tired skin

BY EMILY LAMBERT

SHARLENE BREITKREUZ, A 55-year-old hospital employee in Virginia Beach, spent years tanning on local beaches. In the last two years she began noticing crow's feet around her eyes. When she heard of a patient trial for a new, noninvasive treatment promising to reduce wrinkles, she signed up.

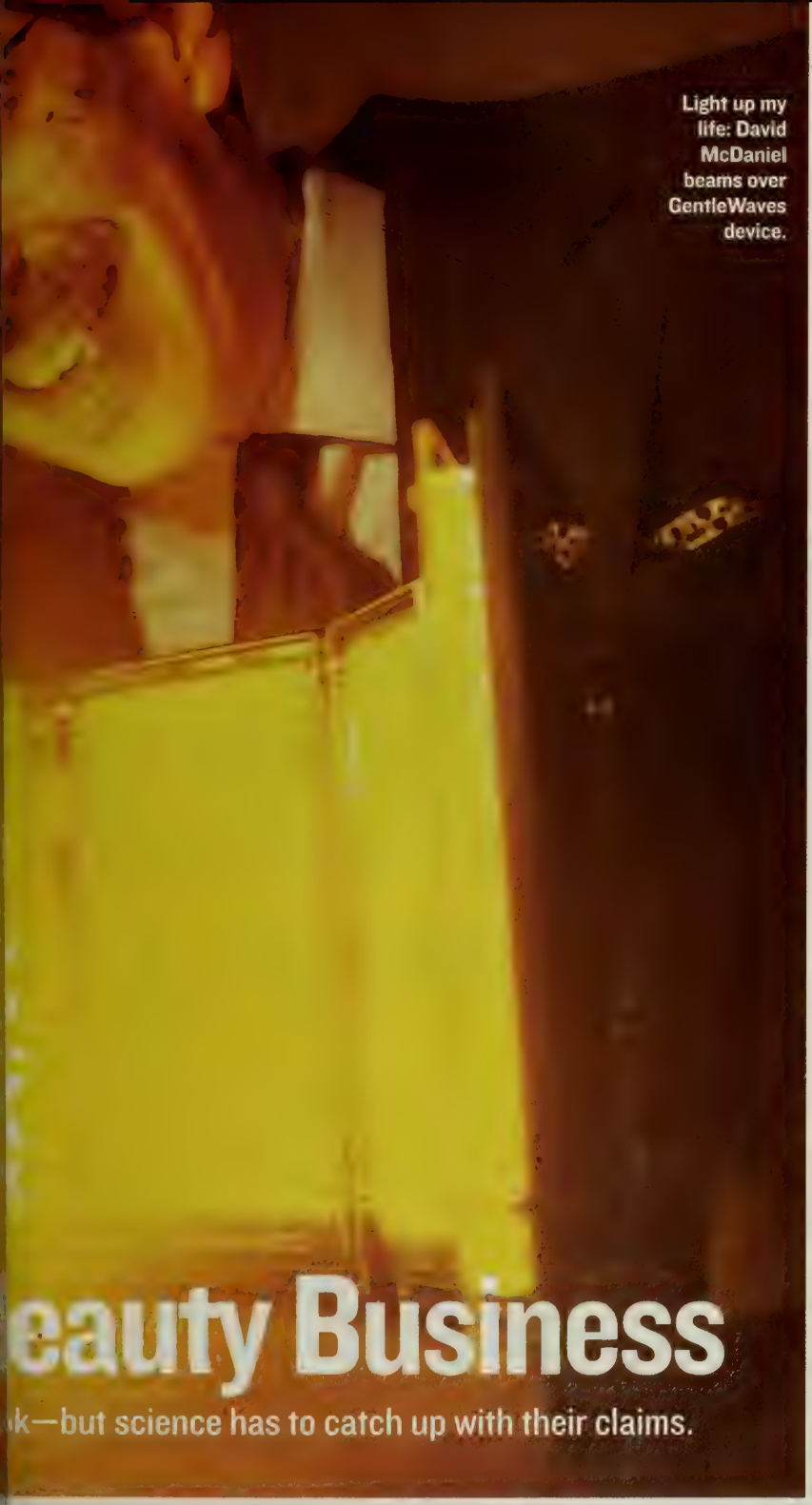
Twice a week for eight weeks, Breitkreuz donned a pair of goggles in a doctor's office and stared into a panel of 2,000 tiny, pulsing orange lights. After six weeks the fine lines were gone and her skin was smoother. "It's almost like going to the tanning booth, but better," she says. "You know it's doing something good for you."

A new theory making the rounds in cosmetic surgery is that a bit of basking under highly tuned cascades of light can reduce wrinkles, remove acne scars and firm up stretch marks. In a process called LED photomodulation, the light stimulates the production of cell-producing proteins under the skin's surface. The LED stands for "light-emitting diode," a semiconductor chip, found in VCRs and radios, that glows when electrified.

The device Breitkreuz used, which resembles the toy Lite-Brite, is called GentleWaves. Its maker, Light Bioscience of Virginia Beach, plans to begin marketing GentleWaves next year, according to its inventor and the firm's founder, Dr. David McDaniel, an assistant professor of Clinical Dermatology & Plastic Surgery at Eastern Virginia Medical School.

The power to eliminate wrinkles with light is a bold claim for a device backed by an unknown, tiny company with scant hard evidence behind it. None of the dozen or so pilot studies performed so far could be called extensive or independent. Each study used only a handful of patients over the course of two to six months, and some patients were indirectly affiliated with the three doctors who started the firm.

The data leave plenty of room for detractors. "Is it possible? Yes. Is it plau ble? Um—maybe. But has it been prov No," says Dr. Rodney Rohrich, chairm of the emerging trends task force for Aesthetic Surgery Education and F search Foundation. "Anybody can p sent data, anywhere, anytime. It's gett it into a peer-reviewed journal based good science that counts."



Light up my life: David McDaniel beams over GentleWaves device.

# eauty Business

k—but science has to catch up with their claims.

LED photomodulation translates the cess of plant photosynthesis into the rkings of human skin cells, deploying body's own cytochromes to build new teins the same way plants use chloro- ll to convert sunlight into cellular lding blocks. The LEDs on Gentle- ves shoot weak light (less than 25 ts) through the skin's epidermis to fibroblast cells, which produce structural proteins such as collagen and elastin. When the light hits the cytochromes inside the fibroblasts' mitochondria, it stimulates the cell's energy transport system. The cell produces more structural proteins, which in turn puff up the skin and give it the appearance of improved tone and elasticity. The LEDs' cool temperatures don't burn or scar, which laser treatments are known to do.

GentleWaves inventor McDaniel says he can send specific instructions to cells by changing the light's wavelengths, frequency or intensity, but he says the light "codes" he has created are proprietary. The doctors refuse to be more specific about what genes are involved and what happens inside the cytochromes. He acknowledges using yellow and red light, but he refuses to say what power intensity is used or for how long.

LED photomodulation has fans in broader scientific circles. Scientists working for the Department of Defense's Advanced Research Projects Agency are investigating whether LEDs can heal eye injuries and skin lesions. This year the government's researchers published results showing that LEDs can clear up mucositis, the mouth sores suffered by chemotherapy patients. One day, says McDaniel, his GentleWaves device may even be shown to spur hair growth and, if it can be made to work in reverse, stall the growth of fat or cancer cells.

For now, GentleWaves' health claims are likely to be dogged by controversy. Each of the doctors behind it have varying degrees of financial interest in Light Bioscience. The company declined to release financial information, but the primary bankrollers are a local lawyer and two brothers in real estate development.

McDaniel and his colleagues have presented their findings at several dermatology conferences, but they have published no peer-reviewed papers. He says they were ready to publish a paper in a small dermatology journal, but decided last month to pull the paper and publish more definitive results in a bigger journal.

On Oct. 31 McDaniel's partner Dr. Roy Geronemus, director of the Laser & Skin Surgery Center of New York, presented the results of a larger study of 90 people, mostly women, to the American Society for Dermatologic Surgery, of which he is president. He reported that GentleWaves produced a 62% improvement in appearance of the skin in the eye area, 36% in the upper lip area and a 26% improvement in skin roughness around the eyes.

McDaniel says tests are being con-

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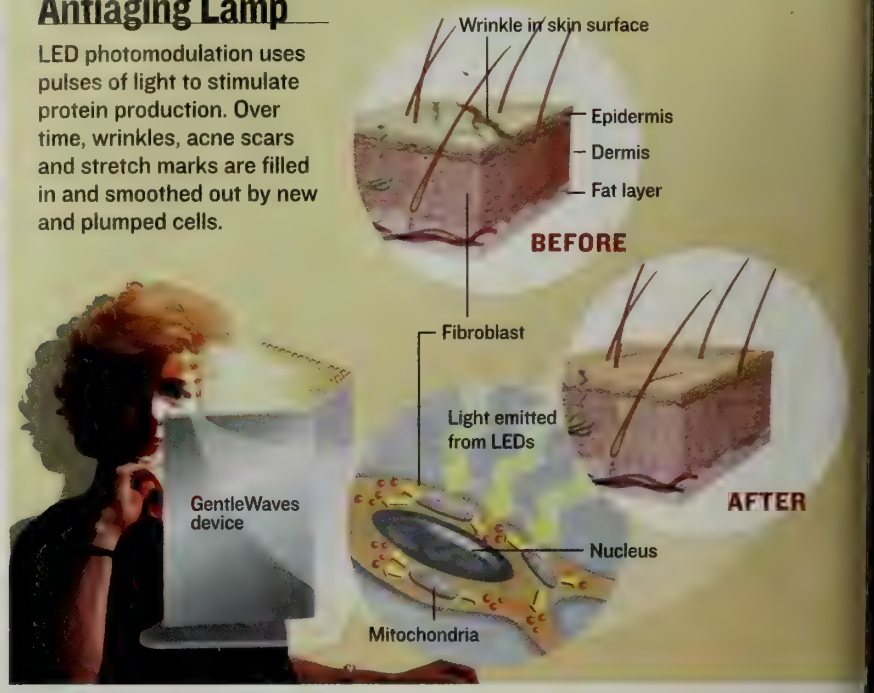
## Antiaging Lamp

LED photomodulation uses pulses of light to stimulate protein production. Over time, wrinkles, acne scars and stretch marks are filled in and smoothed out by new and plumped cells.




ducted at top-notch facilities, notes that all three doctors have university affiliations and says that negotiations are in progress to conduct independent tests next year. "My mission has been science first, commercialization second," he says, promising the science is secure. He plans to release more information at the spring meeting of the American Society for Laser Medicine and Surgery. "I'm pretty comfortable with the technology," says Suzanne Kilmer, president of the ASLMS.

But, given the swarm of vain consumers out there, hard proof may not be prerequisite for success. There were 8.5 million cosmetic surgical procedures performed in 2001, generating $9 billion in surgeons' fees alone, up 48% from 2000. The closest thing out there to LED photomodulation is a controversial procedure called nonablative laser treatment, which uses heat to burn away sub-surface skin so that new cells will replace it. Doctors performed an estimated 127,000 nonablative laser skin procedures this year, up from 110,000 in 2001.

McDaniel, a laser skin treatment specialist, had been researching LED photomodulation for over five years. He formed Light Bioscience in March 2000, subsidizing his research and patent filings with a second mortgage on his house and a loan against his life insurance policy. Early th[illegible] year he brought in fellow laser experts D[illegible] Geronemus and Dr. Robert Weiss, assis[illegible] tant professor of dermatology at John[illegible] Hopkins University School of Medicin[illegible] This summer he raised an undisclose[illegible] sum from the local investors to fund th[illegible] company. The firm plans to file for FD[illegible] approval next year, though it isn't require[illegible] for the device.

McDaniel plans one version of Gentl[illegible] Waves for doctors' offices and a home ve[illegible] sion. The company has yet to fix a price f[illegible] the home version, but physician mode[illegible] could run $55,000. Office treatments w[illegible] be priced to compete with laser treatmen[illegible] which are typically $500.

Several LED devices on the mark[illegible] make claims such as relief of arthriti[illegible] related pain. Michael Moretti, editor [illegible] trade magazine *Medical Laser Insig*[illegible] expects to see 100 LED technologies o[illegible] next year, most of which he says wo[illegible] have any more effect than a penlight.

But Sharlene Breitkreuz, for one, [illegible] convinced it works. Within a month of [illegible] first treatment, she says, friends and fam[illegible] were complimenting her on her smoot[illegible] skin. "Like a baby's heinie," she sa[illegible] adding that she'd jump at the chance to [illegible] GentleWaves again. Who needs scienti[illegible] proof? "He certainly proved it on me."

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# Sweet Dreams and Flying Machines

**The warplanes of World War II live on at a little airport near Virginia Beach.**

BY BRIGID MCMENAMIN

EVERY DAY SLEEK U.S. NAVY F-14 TOMCATS AND F/A-18 Hornets pierce the sky over Virginia Beach, home of Air Station Oceana. So dazzling are the jets that you might not notice one of their ancestors creeping along the horizon: a propeller-driven Spitfire, of the kind that defended England against the Luftwaffe during World War II. The antique belongs to Gerald Yagen, chief executive of Tidewater Tech vocational schools, who collects World War II warbirds in a hangar at nearby Suffolk Airport.

Yagen loves these old geezers, though at 56 he's too young to remember the war and has never even served in the military. "It's the joy of being able to fly the aircraft," he explains, recalling a September afternoon in his TBM Avenger, the same type of torpedo dive-bomber former President George Bush was flying when he was shot down over the Pacific. Anybody can drive a Ferrari, he says, but "not everyone can land a Corsair on a narrow runway."

The Virginia native started collecting World War II aircraft in 1994, partly as a way to lure students into an aviation maintenance program at one of his 14 Tidewater Tech schools. A third of Yagen's 3,000 students take courses related to aviation.

Yagen's collection of 15 flightworthy WWII planes isn't the biggest of its kind, nor the most valuable. The Commemorative Air Force in Midland, Tex. (known until last year as the Confederate Air Force) has 145 World War II planes; the Smithsonian, 84. Private collector Kermit Weeks has 27 in Polk City, Fla., part of a diverse aircraft collection worth maybe $40 million. But Yagen's is the only one that plays a practical role in a profitmaking business.

When Yagen started out collecting, he bought wrecks and fixed them up, thinking it would be cheaper than buying restored planes. Experience has taught him otherwise. First he bought a Curtiss P-40E Warhawk that the Russians lost fighting the Nazis near Norway. Its condition: "Like dropping a car from a thousand feet, then leaving it out for 50 years to rust." To restore it he cannibalized parts from four other wrecks. Restoring a B-25J bomber has proved similarly taxing. Four years and $600,000 later, Yagen sighs, "I coulda gone out and bought one [intact] for $400,000."

He now prefers to buy planes already airworthy—"unless it is a very rare, one-of-a-kind aircraft." Like, for instance, his 1939 Messerschmitt BF-109E-7, which he is restoring in eastern Europe. The single-seat fighter was one fine machine in the 1930s, with its stressed-skin design and retractable landing gear.

Hunting for such rarities can be a full-time job, and until recently Yagen kept a retired U.S. Army Ranger on staff to search for wrecks. Now he does it himself, helped by a network of freelancers around the world. He runs newspaper ads targeted at anybody who might have seen a plane go down in the 1940s—the proverbial old farmer who "calls and tells me about his brother and him going to school, when they saw a young Marine pilot

ming: Gerald Yagen has scoured the globe for vintage aircraft.

walking out of the woods."

Yagen likes to focus searches on remote lands ruled by dictators—Myanmar (Burma), for example—where scared locals are apt to let planes sit unmolested for decades. Even better are dictatorships in dry lands, where wrecks are more free from rust and rot. Libya, he says, is a terrific place to look for airplanes.

In Russia a collector has to pay $10,000 to $15,000 just for export permits. And three Russian historians must certify that the plane has no historic value. The only reason Yagen got to export a Russian-made Lavochkin V from Ukraine was that, after communism's collapse, the region ceased to be a part of Russia. "I think it's the only Lavochkin V that survived the war," he says. The Germans, by contrast, are quick to part with aircraft that, if slathered with swastikas, cannot be displayed anyway: "It's an embarrassment to them."

Yagen just shelled out $60,000 to overhaul the engine on his Hurricane; he figures he's spending at least $1 million a year maintaining his planes. Nearly $100,000 of that goes to insurance, which he keeps cheap by limiting the motion coverage (for flight operations and liability) to three planes. The rest get only ground and hangar coverage. Flights, he figures, cost $1,000 an hour.

So precious have old warbirds become that curators argue it's unconscionable for collectors like Yagen to fly them: They might be wrecked and lost forever. The Smithsonian never lets its collection leave the ground. But for Yagen, flying is a big part of the fun of ownership.

School in the sky: a 1941 Boeing Stearman Navy Trainer.

The most Yagen ever spent on a plane was $900,000 for a 1943 Vickers Supermarine Spitfire Mark IX, originally mass-produced in England in 1943 for $64,000 a copy. Light and nimble, it flew 15 sorties in Italy and was caught on color film in Corsica by William Wyler, who directed *The Best Years of Our Lives.* Later it wound up in the Israeli Air Force, which left it derelict in a playground to tempt children to become pilots. A collector bought it and sold it to Frederick Smith, founder of Federal Express, who renovated it and sold it to th guy who then sold it to Yagen.

The plane Yagen prizes most: a 194 Hurricane MK XII-B, which sat on a far in Saskatchewan from 1948 to 1965. It handcrafted, the tubular steel frame co ered in fabric like a kite. There are on eight flying in the world, he thinks.

One problem with collecting milita aircraft is that you're competing against t Pentagon. The U.S. Navy claims perpetu rights to all its aircraft, no matter how lon ago they crashed, or where. Yagen coun himself lucky to have gotten his hands c a 1944 Navy Corsair, used to fight Japan the South Pacific (and later featured in t 1970s television series *Black She Squadron*). He had to pay $720,000 for h and only got it because the Navy had so it to a private aviator in the 1950s, befo embarking on its historical preservati program. "Today," he says, "the Navy pro ably would never sell one." It's the first U warplane to top 400mph.

Along with planes, Yagen has picked other period pieces, including a Germ V-1 flying bomb—the original cruise m sile. Its popping ramjet engine caused victims, the British, to dub these missil "buzz bombs." Between 1944 and 1945 t Germans sent 9,251 sputtering across t Channel. "It has all the internal guidan systems and everything," he says. "We g the engine started, but we couldn't get it keep running." A special challenge, th for some eager young mechanic.

## Where to See WWII Warbirds Fly

**APRIL 2–8, 2003** Sun 'n fun: Lakeland, Fla. 863-644-2431, sun-n-fun.org

**JUNE 6–8, 2003** World War II Weekend, Mid Atlantic Air Museum, Reading, Pa. 610-372-7333, maam.org/maamwwii.html

**JULY 12–14, 2003** History of Flight, 1941 Historical Aircraft Group Museum, Geneseo, N.Y. 585-243-2100, 1941hag.org

**JULY 29–AUGUST 4, 2003** AirVenture, Experimental Aircraft Association, Oshkosh, Wis. 920-426-480, airventure.org

**OCTOBER 4–5, 2003** Airshow 2003, Commemorative Air Force, Midland, Tex. *(See below.)*

## See WWII Planes on Display

**FANTASY OF FLIGHT** Polk City, Fla. 863-984-3500, ext. 223, fantasyofflight.com

**COMMEMORATIVE AIR FORCE** Midland, Tex. 915-563-1000, commemorativeairforce.org

**NATIONAL MUSEUM OF NAVAL AVIATION** Pensacola, Fla. 850-452-3604, Naval.Museum@smtp.cnet.navy.mil, naval-air.org

**UNITED STATES AIR FORCE MUSEUM** Wright Patterson AFB, Dayton, Ohio. 937-255-3286, wpafb.af.mil/museum

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# It's Bunk?

**That's what Henry Ford called history. Maybe so, but it's appreciating fast, say manuscript collectors.**

BY SUSAN ADAMS

IN JANUARY 1789 GEORGE WASHINGTON put quill to paper and, in consultation with aide David Humphreys, drafted his first inaugural address. On page 27 he wrote: "This Constitution, is really in its formulation a government of the people; that is to say, a government in which all power is derived from, and at stated periods reverts to them." Stirring, fundamental stuff.

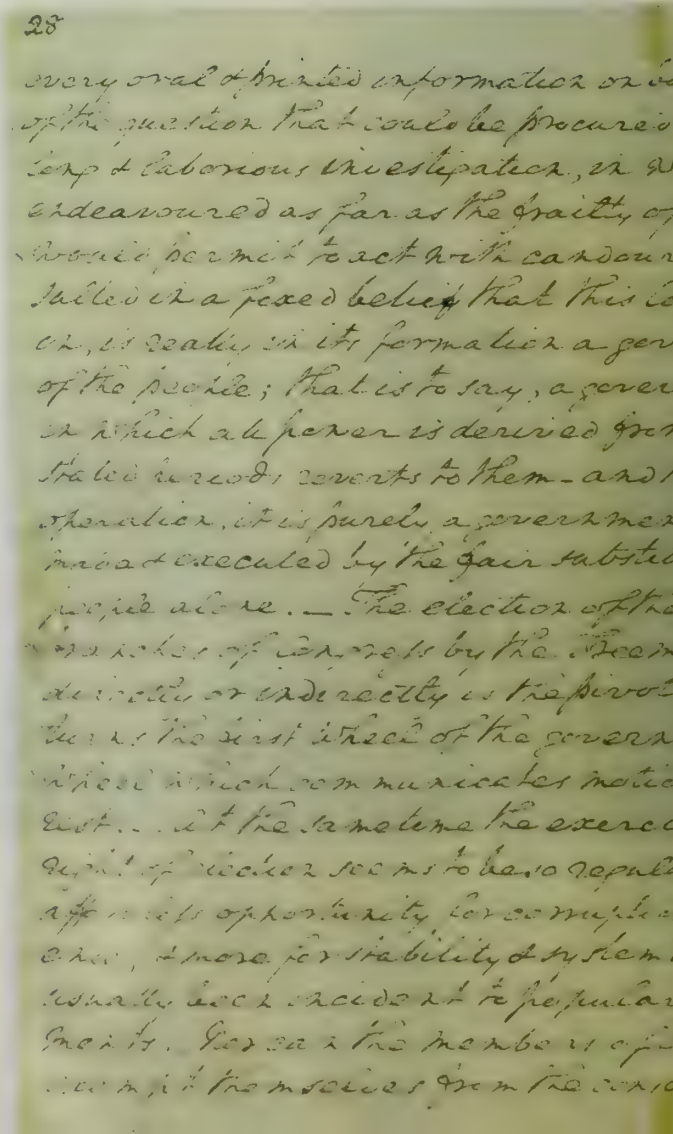
But Washington never delivered this speech. His friend James Madison cautioned it was too long (73 manuscript pages) and hyperbolic. So Washington delivered a shorter, watered-down version. The long original, deemed disposable, later was given away to autograph seekers, one piece at a time. Thus was one of the seminal documents of U.S. history lost forever.

Or so it seemed until the 1950s, when collector Forest Sweet, who had accumulated six stray leaves (a leaf being a single two-sided page), deduced they came from Washington's original. In 1957, after his death, Parke-Bernet auctioned off the lot, including the "of the people" leaf. Price: $3,400.

Now three of these same leaves are up for sale again, part of a Dec. 13 auction at Sotheby's in New York. Not only do they offer a window into the first President's mind, they also provide a vivid illustration of price appreciation: Sotheby's is asking $350,000 (low estimate) for the "of the people" leaf alone. Christie's, in a competing Dec. 19 auction of U.S. historical manuscripts, is selling a copy of the Emancipation Proclamation signed by both Lincoln and Secretary of State William Seward. Estimated value: $600,000 to $800,000.

The highest price ever fetched for a single Washington inaugural leaf went to the owners of this magazine nine months ago. In it Washington defends his motives for accepting the presidency and denies harboring dynastic ambitions ("I have … no family to build in greatness upon my Country's ruin."). Purchased in 1979 for $4,000, it brought in $358,000. In that same auction the manuscript for Abraham Lincoln's last speech, delivered from the window of the White House three days before his assassination, sold for $3.1 million.

Prices of this kind prompted the owner of the nine lots in Sotheby's December auction,



**Washington wrote here: A page from an early draft of the first President's 1789 inaugural address.**

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# Gold in The Sofa Cushion

For prospectors, it's the Lost Dutchman Mine. For manuscript hunters, it's any of the following. None of the documents below is known to have been destroyed. So where are they? Stuffed, perchance, into a sofa or a sideboard. At next Saturday's rummage sale keep an eye peeled for the following.

- Lincoln's letter to Lydia Bixby. In *Saving Private Ryan* a general reads a copy of this famously inspiring missive. In it Lincoln offers his condolences to Mrs. Bixby, who had lost five sons in the Civil War. The letter was printed in a Boston newspaper in 1864. The original, however, has never surfaced.
- Printer's copy of the Declaration of Independence. John Dunlap, Congress' official printer, received a manuscript on July 4, 1776, from which he made the first printed copies of the Declaration. It's not known whether the pages he worked from were in Thomas Jefferson's hand or inscribed by a clerk.
- The Gettysburg Address—as delivered at Gettysburg. After making his speech Lincoln wrote out five souvenir copies, all of which reside in institutions. What about the manuscript he used on the dais? It's never been found.
- The manuscript for Thomas Paine's *Common Sense*. —*S.A.*

Frederick Nederlander, to sell. A 78-year-old retired auto parts manufacturer from Franklin, Mich., he bought his collection at the selfsame auction house 23 years ago, paying $5,500 for the "of the people" leaf.

Why are values strengthening in an otherwise unsteady art and collectibles market? The best explanation comes from one of the field's top private collectors, New York investment manager Richard Gilder, who, together with friend and collecting partner Lewis Lehrman, owns some 50,000 manuscripts and printed material that date from colonial times to the present. Original documents disclose intimately, and with special force, the workings of the minds that made them. Says Gilder, "You can see the struggle." By way of illustration, he points to two very different versions of the Constitution, both in the Gilder-Lehrman collection.

The first, from August 1787, begins, "We the People of the States of New-Hampshire, Massachusetts, Rhode-Island and Providence Plantations, Connecticut...." The second, printed six weeks later, says, "We, the People of the United States...." Somewhere in between came the lightning flash that gave Americans their national identity. "Heirlooms," Gilder calls such documents. "The Holy Grail of the world's greatest story."

## "Lost" papers, though, have a way of turning up

It was Gilder's instinct as an investor that prompted him to form a collecting team with Lehrman in 1990. They viewed U.S. documents as undervalued. Anticipating the day they would give their collection away, Gilder says he hoped "the savings on my income tax would pay for what I'd invested." Has it turned out that way? "Almost." The pair already has donated many pieces to a nonprofit entity (their own), which makes them available to schools and museums.

This species of collecting isn't new. In the 18th century collectors sought writings by the Pilgrims and from the Salem witch trials. The old-fashioned approach was to collect according to lists, such as all the signers of the Declaration of Independence or all the Presidents. (Gilder and Lehrman have a collection of pardons from every President.) Now the fashion is to get manuscripts from history's most significant figures. Abraham Lincoln dominates, followe closely by Washington, Jefferson, Adams an Franklin. Today's most sought-after item come from the period bookended by th American Revolution and the Civil War.

New collectors often are surprised by th volume of material in circulation. Unt presidential libraries became de rigueu (starting with Rutherford B. Hayes), presi dential manuscripts sometimes were han dled carelessly. Some were scattered, othe lost. Washington's 1789 address is just a cas in point.

"Lost" papers, though, have a way turning up, either as a result of assiduous de tective work or pure dumb luck. Chance di covery lends excitement. Of the 14 leaves Washington's inaugural now accounted fo the last was found six years ago, in a mo unlikely place: a small town in East Angli England, where it had been stuffed into a album lying underneath a sofa. It sold Phillips for $352,000. No one can say the re of the speech won't eventually emerg though who knows where or when *(see box*

Made from linen, 18th- and 19th-cen tury paper ages well—far better than mo ern paper, which crumbles. Moreover, i questions of value, content almost alwa trumps condition. A page may be ripped may be torn. But if it played a role in histor its value is unblemished. Caring for histor manuscripts is relatively easy. Nederland kept his collection at home, in a set of line and-leather slip cases. Serious collecto keep theirs in folders or envelopes made acid-free paper. When framing they u standard museum-quality materials, such ultraviolet-resistant Plexiglas.

The number of individuals and instit tions chasing American historical man scripts is small, compared with other are of collecting. For materials priced abo $100,000 there are probably just 100 possi bidders, estimates dealer Seth Kaller. O the next five to ten years prices will be b stered by buying from several new museu now under construction. These include t National Constitution Center in Philad phia, set to open next year, and the Abrah Lincoln Presidential Library & Museum Springfield, Ill. Both are in the process building their manuscript collections.

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Player on the fifth green of the U.S. Open, 1965.

# Going Private

## Why sell a collection privately, rather than at public auction? Ask Gary Player.

BY ALAN FARNHAM

IN THE COURSE OF HIS 49-YEAR CAREER AS A PROFESSIONAL GOLFER, GARY PLAYER HAS accumulated mementos from 163 victories. Jack Nicklaus won more PGA tournaments, but Player played the globe. "My ambition," says the South African, "was to become the complete world golfer." Among the 300 items in his collection are a green jacket from the Masters and a three-tusk trophy from a tourney in Ivory Coast. Now he wants to sell this hoard—but not to just anyone, and not neces-

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sarily to the highest bidder.

For Player—as for many passionate collectors—considerations besides money matter. If all he wanted to do was to get the most dough for his collection, he'd have put it up for public auction.

But that would mean scattering it to the winds. "Sitting here at my ranch," he says, "looking at all these trophies, I get goose pimples thinking it could be broken up." Better still if it could reside "in the World Golf Hall of Fame, for millions of people to see."

Giving it outright to a nonprofit institution, though, isn't an option. He needs the money. At age 67, he wants to fund a family trust and to endow a nursery and grade school on his estate outside Cape Town. So two years ago, in consultation with Sotheby's in London, he decided to sell

**If all he wanted to do was to get the most dough for his golf collection, he'd have put it up for public auction**

his collection by way of what the English call a negotiated private-treaty sale—what in the U.S. would be called a private sale. He's set $5 million as the minimum bid.

Such sales have always been a facet of the art world. Dominique Lévy, Swiss-born head of Christie's private sales department in New York, says the reason a client opts for private sale could be that the auction location would be too far away or that he wants to impose special conditions—for example, that the collection be kept intact.

In Europe, Lévy explains, "there is a tradition of disposing of a collection in a quiet, calm, controlled way. A more intimate process." Older people, especially may find it hard to deal with all the stress and excitement that accompanies a public auction. Then she cuts to the chase: "And what if it doesn't sell?"

If a work is offered at public auction and fails to sell, its reputation suffers. T

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This humble putter from a Japanese department store helped Player win the Grand Slam.

world knows its fate. If the same work were shopped around discreetly to just two or three of the most likely buyers, and if they all then took a pass, less damage would be done. A private sale, says Lévy, "protects the virginity" of the artwork.

But by forgoing a public auction, doesn't a seller give up his chance at getting the highest possible price? Not necessarily, as New York City's theater club, the Players, recently found out. The club considered selling a John Singer Sargent portrait of club founder Edwin Booth at auction, then thought better of it. "You never know with auctions," says John Martello, the club's executive director. "You only hear about those rare situations where a painting captures the public's imagination, and its price goes into the stratosphere. Ours was not such a painting."

No siree. It was unwieldy (over 6 ft. tall by 5 ft. wide), and its subject was the brother of the guy who shot Abraham Lincoln. On top of all that, the club—like Gary Player—wanted to impose conditions. It wanted a buyer who, ideally, would allow the painting to remain on display; or, failing that, someone who would pay to have an extremely good copy made, so the club could exhibit the copy. Estimates for what the Sargent might bring at auction went no higher than $1.3 million—"if we were lucky," says Martello. In the end, the club got luckier. The private sale yielded $2.5 million from a buyer who agreed to spend $50,000 to make a copy.

The Gary Player sale, for which Christie's has produced a glossy, 150-page catalog, is something of an [illegible]. Usually, no catalog is issued for a private sale. There's no advertising, and it's easier for the auctioneer to make a profit. Lévy estimates that in the categories of paintings that her department handles, private sales account for 20% to 25% of Christie's total.

Fees range from 5% to 20%, depending on the value of the artwork (or collection) sold. Marc Player, who handles business matters for his father, negotiated 10%. Tax considerations? If you're a U.S. citizen, there's no difference between selling privately or at auction.

Bids for the Player collection must be received by Christie's no later than Oct. 8, 2003. When the envelopes are opened, what if no bid is quite right? Say the highest bidder offers $10 million but refuses to agree to Player's restrictions? "Totally untenable, totally unacceptable," thunders Marc. Gary says that he'd take less than the $5 million minimum if he especially liked the bidder's plans. He is wistful about several of the items—his famous putter, which he bought 30 years ago for $60 ("The best investment of my life!") or the black-and-white trousers he wore as a protest against apartheid. Says he: "There's a message in those pants."

Player's famous "black-and-white" trousers—a pleated protest against apartheid.

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# Revenge of The Pipsqueaks

## Online, itty-bitty auctions are besting the big boys.

BY MISSY SULLIVAN

ANYONE WHO GOES UP AGAINST A category-killer like Ebay is supposed to be dead meat. Once again, though, conventional wisdom is wrong. Across a wide swath of markets—from electronics to toys to stogies—niche auction sites are thriving. Their strategy? Offer collectors expertise, service and the cachet of belonging to a private club of cognoscenti.

To say nothing of bargains—which users of Cigarbid.com, for instance, would like to keep hidden. A 24-cigar box of Natural Ltd. brand's Pimp Sticks recently sold on the site for $76. On Yahoo Auctions a box currently is quoted at $110. It's not just price that makes niche auction sites a hit. Community is just as important. Why do buyers shop at a knowledgeable bookseller like Portland, Ore.'s Powell's, for example, when they could get better deals at Costco? You can't get word of where Anne Rice will be signing her latest neckbiter from a discount warehouse.

Cigarbid's customers—who range from chief executives to truck drivers—liken the site to a neighborhood tobacconist where they can not only swap stogies, but also vacation photos, fishing stories and bets on football pools. (Got some "peppery medium smokes"? Someone with the screen handle Cigar 25 has "15 cinco vegas double coronas" waiting for trade.) The site's best feature, though, is its deals in premium handmade cigars, like the new Acid Kuba Kuba or the venerable Gurkha Robusto at prices averaging 40% off retail. Selection is deep and bidding often light.

Small online auctions are benefiting, generally, from an Ebay backlash. Message boards (like the ones at Collectoronline.com, a collectibles site) are filled with gripes from sellers wondering if the world's largest flea market may not have gotten too big. "I have been selling on Ebay for almost four years. There is so much more competition now it is hard for me to make any profit at all," complains a seller who goes by the name Extrachef.

Bernhard Lauser sells 19th-century British travel literature through Voyager Press Rare Books in Vancouver, B.C. He lists auctions on Ebay and the seven-year-old online arm of Pacific Book Auction Galleries (pbagalleries.com). Despite PBA's tiny traffic statistics, Lauser is still able to match the 40% sell rate he gets on Ebay. One loyal PBA buyer is James Pulis, who has a collection of first-edition Jack London novels and bids via a dial-up connection from his Durango, Colo. home. While he appreciates the well-researched descriptions and professionally accurate grading on PBA, he warns of the danger of trading on Ebay's free-for-all. "On Ebay, you have some amateur sellers who think they have a first edition, but it's really a book-club edition. I don't have time to ask everybody for a picture of the copyright page," he says.

Worse, big auction sites have become a haven for fast-buck artists. In 2000 Operation Bullpen, an FBI sting, collared six Ebay sellers for hawking forged autographs of athletes and celebrities.

According to noted baseball memorabilia collector and Denver attorney Marshall Fogel, a seller's reputation and authentication skills are critical. Fogel has a $12 million collection, including a Joe DiMaggio 1951 World Series uniform (one of the last he wore before retiring) and one of three known, certified "gem-mint" condition 1952 Topps Mickey Mantle rookie cards. Fogel shops Ebay every day, he says, but cautions that you need an extremely high level of knowledge to do so. "You need to know how to read the labels of bats, to know if they were game-used. With photographs, you have to know the paper, and make sure it is simultaneous with the time the photo was taken. There are a lot of copies made after the fact."

While Fogel buys baseball cards on Ebay, his more significant online purchases occur at MastroNet.com, a Forbes Favorite in the category of niche auctions. At MastroNet, Fogel has nabbed items like Ty Cobb's passport (price: $16,000) and a Lou Gehrig ball ($40,000) signed on the "sweet spot," where the stitching is closest together. "The products are perfectly described, the photos are relevant and Bill Mastro's reputation in the business is impeccable."

*The Forbes Best of The Web site carries more than 3,500 reviews, including those of online auction sites; see forbes.com/bow.*

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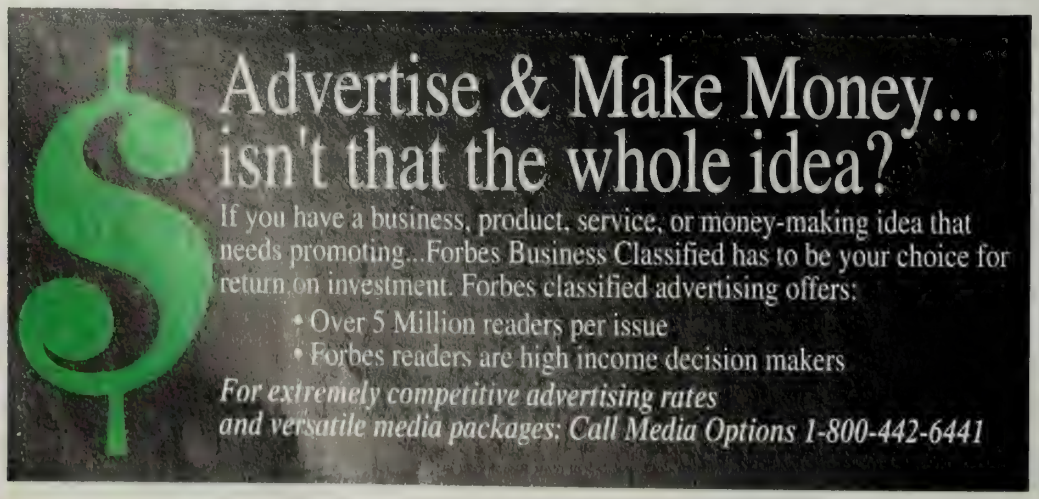


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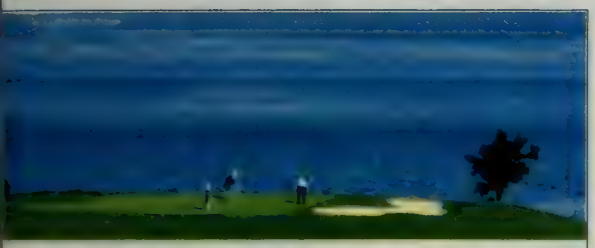

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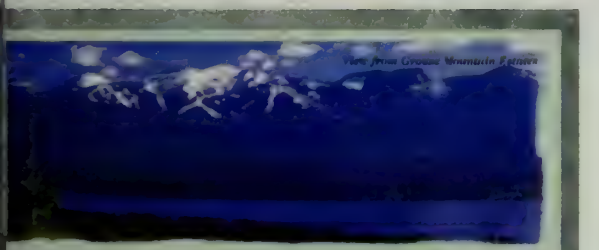


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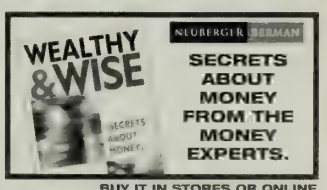


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# THOUGHTS

## On the Business of Life

***Is our free press in danger? Does the fact that most of our citizens are down on journals and journalists mean press freedom is endangered? No. Even the most cursory examination of our 200-year history as a nation shows that the press has never been popular, that presses have literally been broken and burned time and again. The day the press is universally popular, it's dead. But the day it doesn't deserve to be abused for its abuses won't, and shouldn't, occur. We're all essential to making this nation what it is. Freedom of the press in America isn't about to end.*** —MALCOLM S. FORBES

*Journalists belong in the gutter because that is where the ruling classes throw their guilty secrets.*

—GERALD PRIESTLAND

*You should always believe all you read in the newspapers, as this makes them more interesting.*

—ROSE MACAULAY

*I still believe that if your aim is to change the world, journalism is a more immediate short-term weapon.*

—TOM STOPPARD

*There is a journalistic curse of Eve. The woman who writes is always given anti-feminist books to review.*

—REBECCA WEST

*When a reporter sits down at the typewriter, he's nobody's friend.*

—THEODORE WHITE

*The most guileful reporters are those who appear friendly and smile and seem to be supportive. They are the ones who will seek to gut you on every occasion.*

—ED KOCH

*Never trust a reporter who has a nice smile.*

—WILLIAM RAUCH

*Journalist: a person without any ideas but with an ability to express them; a writer whose skill is improved by a deadline: the more time he has the worse he writes.*

—KARL KRAUS

*I like to do my principal research in bars, where people are more likely to tell the truth or, at least, lie less convincingly than they do in briefings and books.*

—P.J. O'ROURKE

*I became a journalist to come as close as possible to the heart of the world.*

—HENRY LU

*I see journalists as the manual workers, the laborers of the word. Journalism can only be literature when it is passionate.*

—MARGUERITE DU

*Most rock journalism is people who car write interviewing people who can't tal for people who can't read.*

—FRANK ZA

### A Text...

***Let not arrogancy come out of your mouth: for the Lord is a G of knowledge, and by him actio are weighed.***

—I SAMUEL

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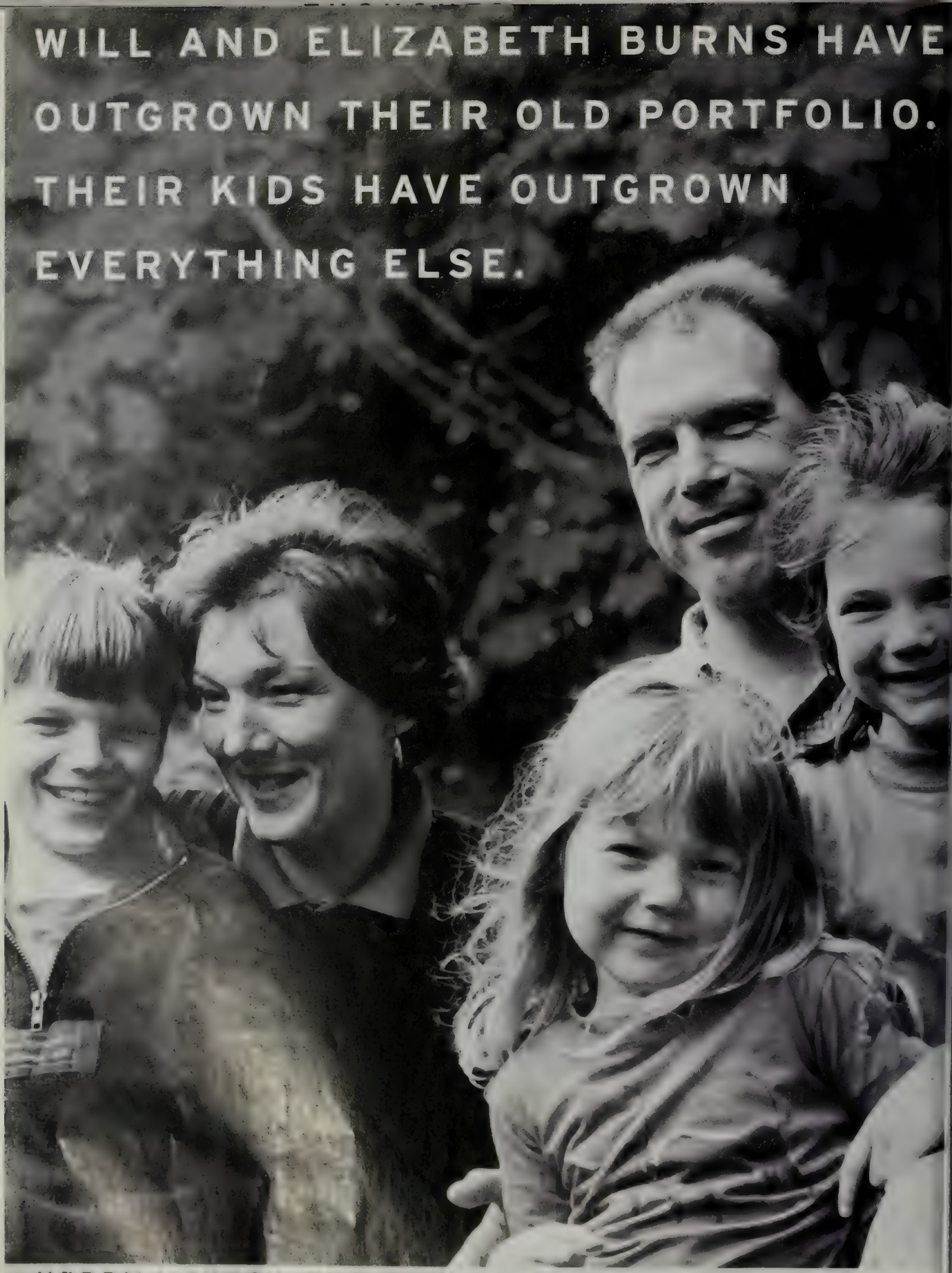


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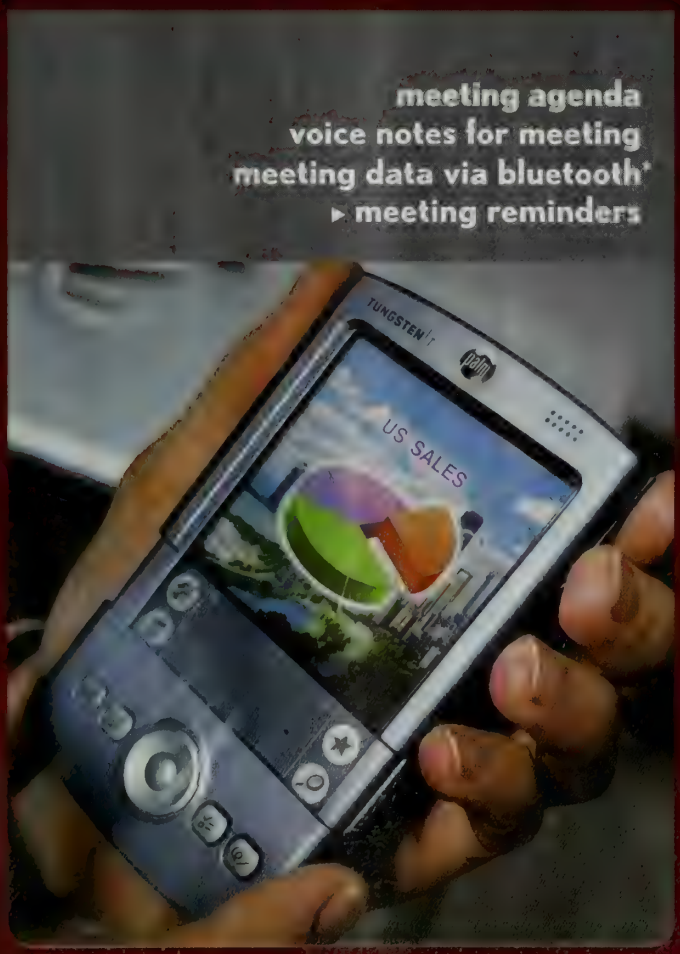


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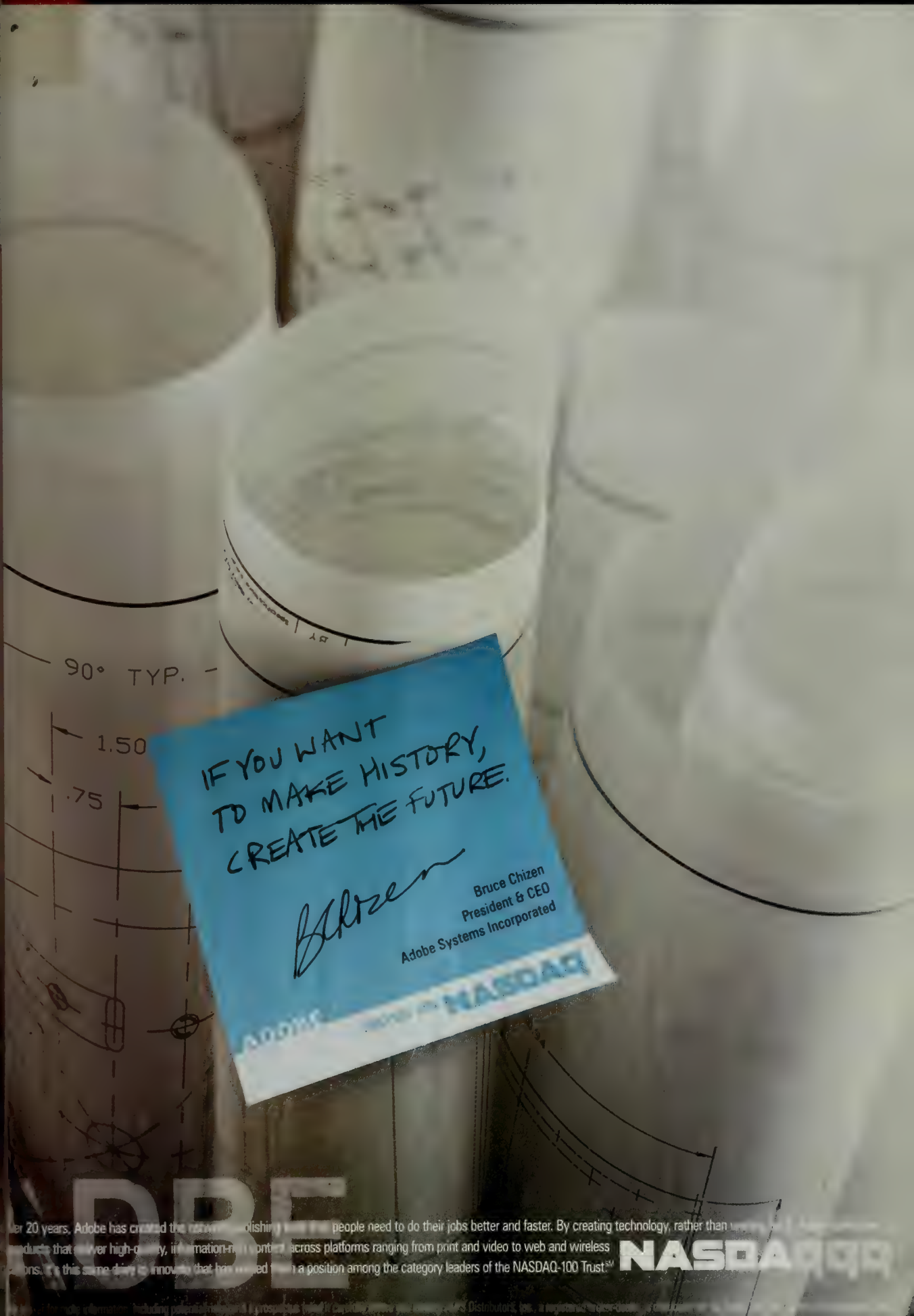
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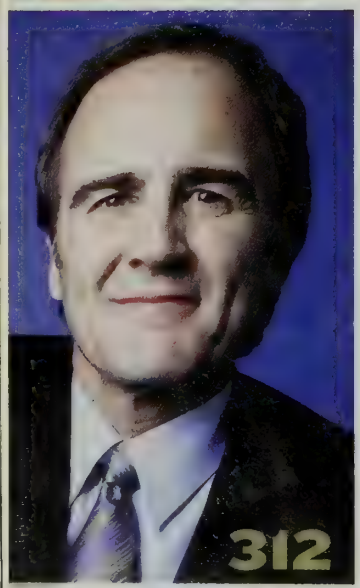

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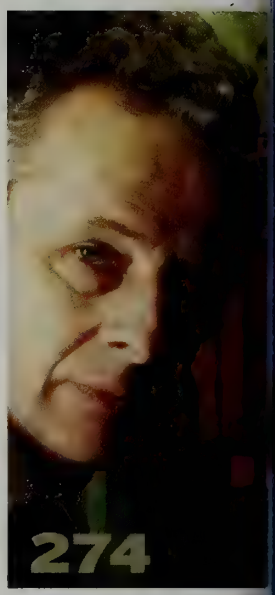

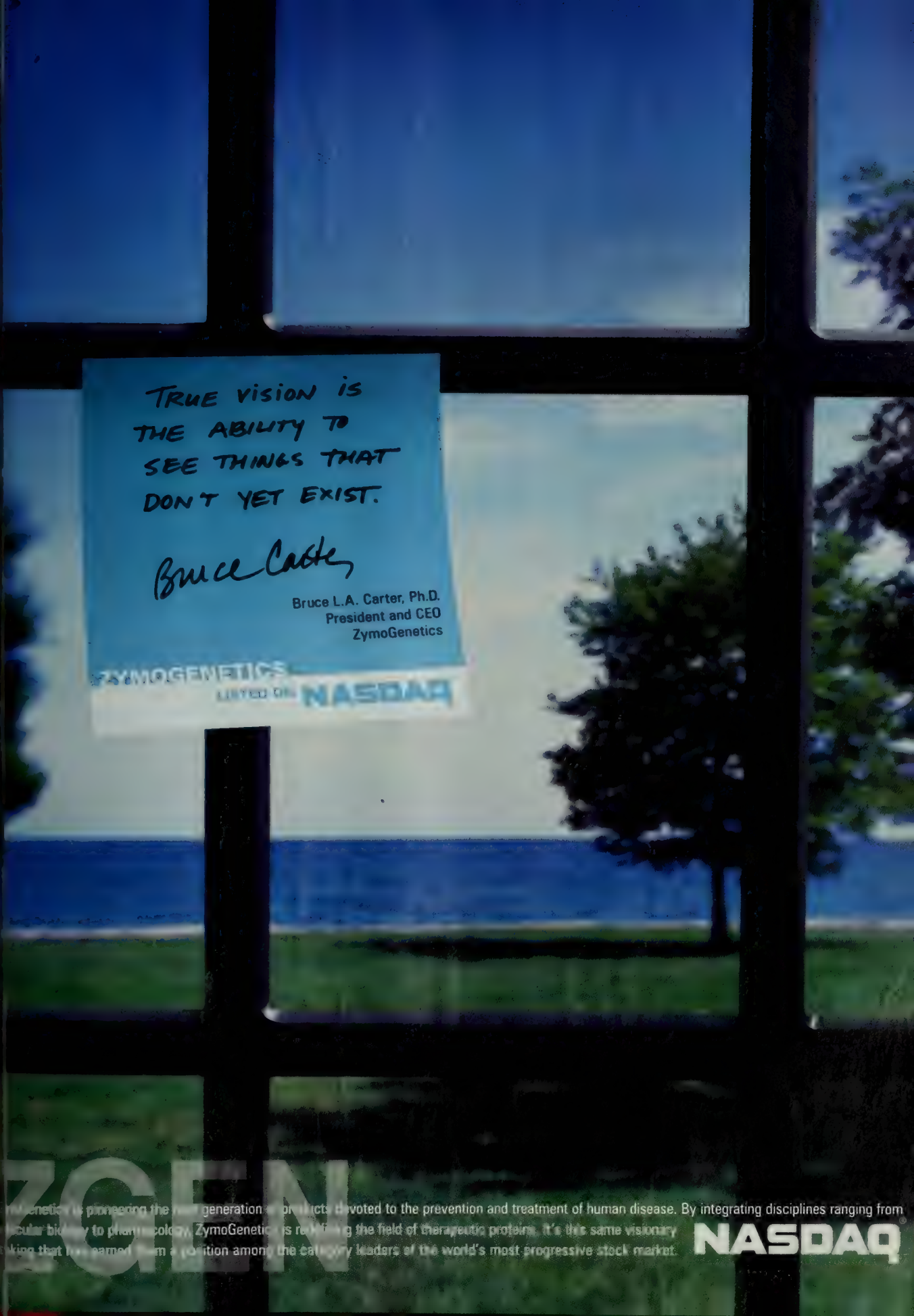


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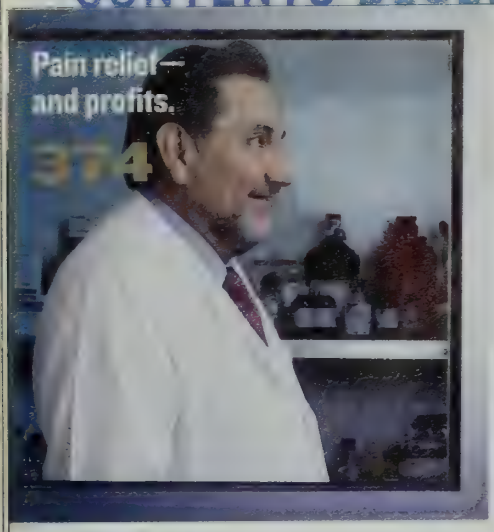



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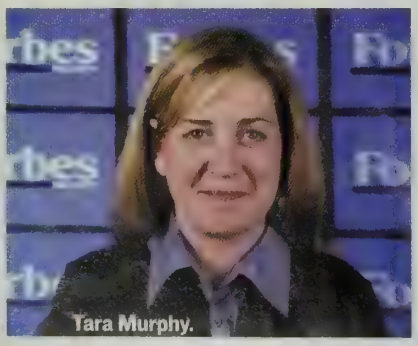
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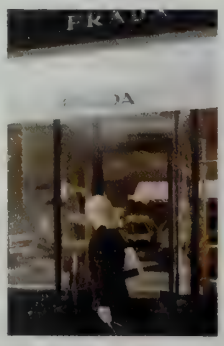
## Big Ideas
Tom Post

The centerpiece of this special issue is an anniversary celebration of 85 years of people, companies and ideas that have transformed business—and of 15 more who may do the same in the future. Go online to our 85th Anniversary discussion board to debate our picks. Online only, a list of people and ideas that didn't make it because they're older than you think. Plus, an interactive time line with full-motion video that intertwines the history of the past 85 years of business with our own. Use the time line to see past magazine covers and read past cover stories.

Lifestyle

## The World's Best Shops
Christina Valhouli

These days one no longer has to travel great distances to find the best English suits, French couture or American cowboy boots. The local mall probably sells them all. What that makes up for in convenience, though, is lost in terms of the experience of walking into a truly great store. From New York's Madison Avenue to Milan's Via della Spiga, Forbes.com presents its selection of the world's best shops. Disagree with our picks? Then post your own favorites on our Best Shops discussion board.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## Forbes Magazine
### The Earnings Outlook
No one on Wall Street is having their feet held to the fire like research analysts. In this issue we look at 2003 consensus forecasts, as well as estimates from top-performing analysts, for the biotechnology, food and home-construction industries. Go online for forecasts and opinions on 12 other industries.

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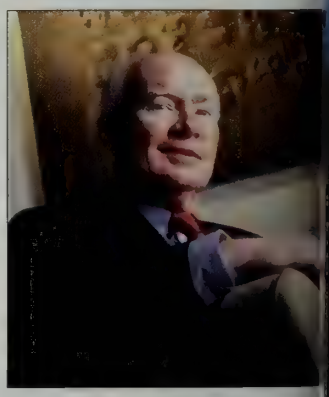
Robert Theleen of ChinaVest.

## Forbes Global
### Mainland Entrepreneurs
For the last 20 years Robert Theleen's San Francisco-based ChinaVest has funded some of China's up and comers. With $300 million under management, ChinaVest has stakes ranging from technology firms to Domino's Pizza and TGI Friday's restaurant franchises.

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opportunities
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# Innovators: The Way They Were

70 YEARS AGO IN FORBES/JUNE 1, 1932

## Words From the Wise

*Benjamin Graham, the great sage of Wall Street, wrote a series of three articles for FORBES in the summer of 1932. His topic: the disparity between corporate finances and stock valuations. Following the 1929 crash more than one-third of all industrial stocks were selling for less than their companies' net assets. Many companies had market caps that were less than their cash reserves. Graham's assessment:*

Since value has come to be associated exclusively with earnings power, the stockholder no longer pays any attention to what his company owns—not even its money in the bank. It is undoubtedly true that the old-time investor laid too much stress upon book values and too little upon what the property could earn.

But like most sound ideas in Wall Street, this one was carried too far. It resulted in excessive emphasis being laid on the reported earnings—which might only be temporary or [illegible]—and in a complete eclipse of what had always been regarded as a vital factor in security value, namely the comp[illegible] working capital position.

What stockholders need today [illegible] alone to become "balance sheet c[illegible]scious," but more than that, to becom[illegible] "ownership conscious." If they realiz[illegible] their rights as business owners, we wou[illegible] not have before us the insane spectacle of treasuries bloated with cash and their proprietors in a wild scramble to give away their interest on any terms they can get.

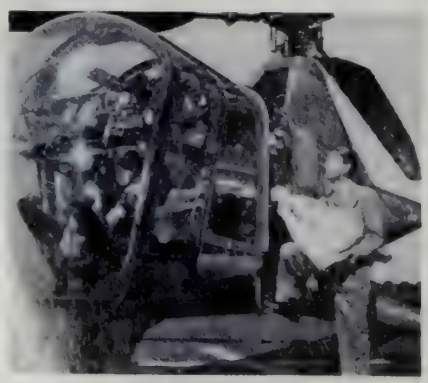
55 YEARS AGO IN FORBES
FEBRUARY 1, 1947

## Fabulous Flying Machine

*Innovator **Igor I. Sikorsky** invented the helicopter in 1939. Eight years later FORBES ran a piece headlined "The Helicopter Comes of Age."*

Unfortunately, the day is still somewhat distant when the skies will be swarming with Sunday helicopter drivers. Meanwhile, however, the helicopter has already been perfected to a point where it is uniquely capable of performing a wide variety of specialized jobs. Witness the recently inaugurated helicopter delivery services—now an established feature of some department stores. Or the spectacular but effective displays of helicopter rescues of survivors stranded at sea, and of incapacitated victims of plane crashes in mountainous wilds.

Talk to Larry Bell, energetic, strong-jawed president of the Bell Aircraft Corp., who's responsible for the world's first school to train pilots especially for helicopter industrial jobs, and you get a realistic picture of just what this machine



with the propeller on top can do for business and agriculture. There's United-Rexall's use of it, for example: Quick to see a natural public relations concomitant to its drug business, the company bought a Bell helicopter and christened it the Rexall "Mercy Ship," to stand ready for all emergencies.

In Washington's Yakima Valley the helicopter, because it can give what amounts to individual attention to every row of vines or crops, dusted the plants more thoroughly and safely than the fast-flying fixed-wing airplane—and with much less waste.

25 YEARS AGO IN FORBES/JULY 15, 1977

## Boglevision

**John C. Bogle**, 48, had considerable diffi[illegible]culty last year when he started looking fo[illegible] brokerage houses to sell his First Inde[illegible] Investment Trust. "The marketing peopl[illegible] were mostly delighted with it," says Bogl[illegible] president and chairman of the 14-fun[illegible] Vanguard Group of Investment Cos. "Bu[illegible] the money-management and researc[illegible] people were less delighted. They don[illegible] want to sell something that indicates th[illegible] services they're paid for are unnecessary,[illegible] says Bogle, crinkling his bright blue ey[illegible] in sympathy.

In the end, the whole thing becam[illegible] academic, because the Vanguard func[illegible] went no-load and brokers lost interest i[illegible]

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selling them. But the experience illustrates The Street's ambivalence about index funds: It hates them but can't afford to ignore them.

Will index funds grow and grow until they become as formidable a phenomenon as Nifty Fifty investing became in the Sixties? Probably not. Index funding, while it has its attractions, is basically an admission of defeat, an admission that the experts can't really beat the market. *Today index funds account for 11% of equity fund assets. Vanguard's 500 Index is the largest mutual fund in existence, with $72 billion in assets.*

**20 YEARS AGO IN FORBES**
**JANUARY 18, 1982**

## Schwab Makes Good

**Charles Schwab**, 44, is selling his company to BankAmerica Corp. for $53 million. On his 35% ownership, that means Schwab gets $18.5 million in BofA stock for a business less than a decade old.

What blinding insight led Schwab—a Stanford M.B.A. who in the early Seventies was coming off a decade of only so-so performance as an investment manager—to such success? He shopped at Kmart, which once had been an also-ran five-and-dime by the name of Kresge's. Schwab, operating a small San Francisco brokerage firm, thought it over and turned his problem into an opportunity.

Drop the extras—research, three-piece suits, impressive offices and hand-holding. Simply execute buys and sells. Discount the price and drive up the volume, just as Kmart was doing with bicycles and beach thongs. "Discounting was the cornerstone of that strategy," Schwab recalls. "But other strategies accompanied it, such as longer hours and other sorts of marketing efficiencies."

So why does Schwab need BofA? The reasons most people call obvious are: BofA's deep pocket to fund his fast-expanding business, and the bank's credibility to erase considerable customer doubts about buying and selling through a "discount broker."

But Schwab, the entrepreneur somewhat jealous of giving credit to a big organization, is impatient with that reasoning. "It's true that the image of discount anything is horrible," he concedes: "except when you get to the magnitude of Kmart. We're probably approaching that now." On the financing point, he says:

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ıntily, "If the BofA deal hadn't come out, we'd probably have gone public thin a year, which would have graded our image."

*1987 Charles Schwab bought his comny back from BankAmerica for $280 illion. The company went public later nt year.*

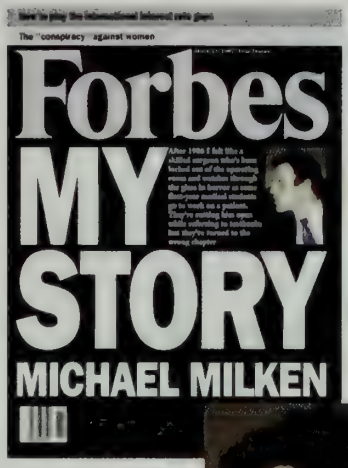
YEARS AGO IN FORBES
RCH 16, 1992

## ailhouse Rock

the media, Michael Milken has beme a symbol of everything that was ong in the Eighties. We do not believe conspiracy theories. Milken was ruths and sometimes grasping, but we have n no evidence that his legal transgresons were other than of the relatively hnical variety to which he has pleaded ilty. None of these illegalities even reotely accounts for the man's astoundg success.

We twice interviewed Milken face-to-face at the Federal Prison Camp at Dublin, Calif., where he is serving a ten-year term. He talked to us about how he came up with some of his ideas:

"I was sitting at my desk in late 1979, and I saw most of the financial assets in America dropping like rocks. The Dow Jones industrials still unable to get over 1000, government bonds at big discounts. Only hard assets were doing well: real estate, commodities, gold, silver. It was at that time that G. Chris Andersen at Drexel and I dreamed up the commodity-backed bond, which we sold for Sunshine Mining. We offered investors a way to get regular income and still have a hedge against inflation in the form of the commodity backing."




How did Milken feel about being taken away from his work?

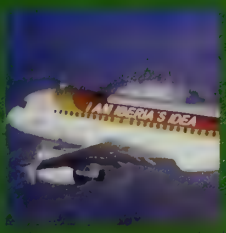
"After 1986 I felt like a skilled surgeon who's been locked out of the operating room and watches through the glass in horror as some first-year medical students go to work on a patient. They're cutting him open while referring to textbooks, but they're turned to the wrong chapter. I keep pounding on the glass and crying, 'No, no, no.'"

And what did he see in the financial future?

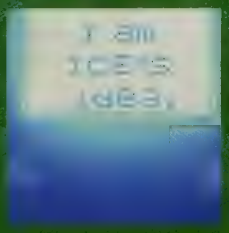
"The love affair with a lot of these IPOs in 1991 and 1992 won't turn out so great. Be careful of these new issues. Be skeptical." F

e new 2003 Ford Taurus SEL. Surprised? Well, if you haven't looked at a Taurus lately, look again.

# It's not how many ideas you have. It's how many you make happen.

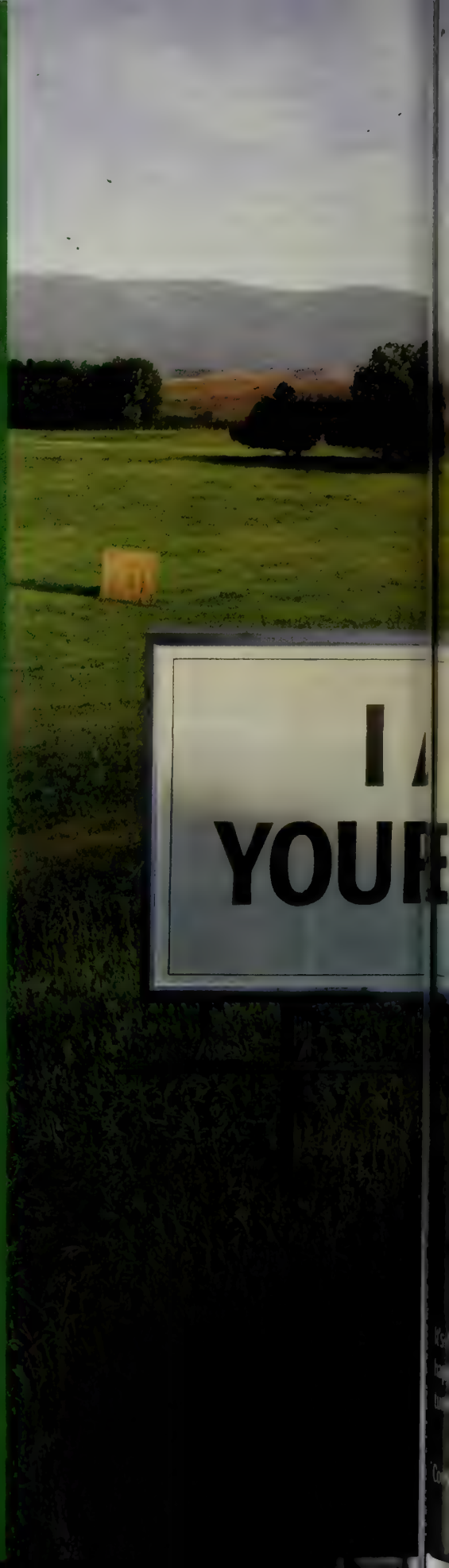



Iberia, the leading Spanish airline, needed to transform its procurement process to help keep its costs at the competitive levels that have placed it among the world's most profitable airlines in recent years. **I am Iberia's idea, delivered.** Iberia called upon Accenture's industry experience in designing a new global purchasing model, implementing web-based purchasing management tools, applying new management methods, and initiating joint purchasing agreements with allies and partners. The transformation program has fundamentally changed the way Iberia approaches purchasing, and has delivered a cost saving of 5%, helping it weather the industry's recent downturn.




Because the vast bulk of global trading in natural gas, electric power, oil and precious metals was still being executed by phone and fax as recently as two years ago, there was an overwhelming need for an open, real-time multidealer electronic marketplace for over-the-counter commodities trading. IntercontinentalExchange, or ICE, was conceived to fill the void. **I am ICE's idea, delivered.** In just nine months, a project team led by Accenture operationalized and deployed a web-enabled trading platform that's now installed on more than 9,000 desktops worldwide. Delivering faster executions and true price competition, ICE has already completed more than 500,000 trades worth $450 billion.

Frustrated with the administrative inefficiencies that had grown up around various student loan programs over the years, the U.S. Department of Education [illegible] to transform the Office of [illegible] Student Aid (FSA) into the government's fir[illegible]ed organization, supported with modernized tec[illegible] and services. **I am the U.S. Depart[illegible]tion's idea, delivered.** Accenture helped FSA [illegible] tion blueprint, realign itself to improve [illegible] ce costs and adopt proven business and gov[illegible]ces. Now delivering satisfaction levels th[illegible]ate sector, FSA is on track to realize substan[illegible]y savings.



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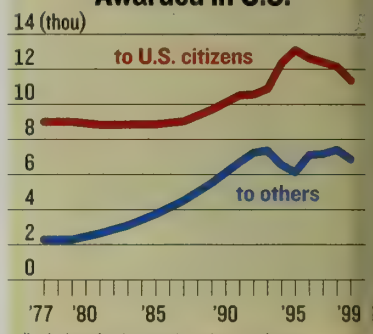
# SIDE LINES

## The Economics of Envy

Foreigners are gaining on us. Someday China will be running circles around the U.S. in biotech and solid-state physics. This is good.

Or is it? If you hesitate before signing on to the idea of imported science, it could be because you are only a fair-weather believer in free trade. For this debate let's assume that the U.S. continues to stride ahead in research and development, but that the Chinese stride ten times as fast. They get the lion's share of patents in the 21st century. Where do you stand?

We're globalists here. Ever since this magazine was founded 85 years ago by a Scottish immigrant, it has stood, without reservation, for the notion that national borders should be wide open to the flow of goods, capital and ideas. In that tradition, Assistant Managing Editor Tom Post has put together this anniversary issue to celebrate the success of capitalism in spreading prosperity by spreading innovation.




As it happens, our list of the most consequential business and technology innovations since 1917 has a very American flavor *(see p. 124)*. I like to hope that our support of free trade is a matter of principle rather than chauvinism. But still, globalism would have a different feel if the U.S. were at the receiving end of high-value-added goods.

Once, while denouncing tariffs on cars, I got this rebuttal from a Detroiter who was sympathetic to protectionism: "Easy for you to like free trade. FORBES doesn't compete with any Japanese magazine imports."

Intellectuals tend to like globalism because it has enhanced our living standards. We ship operating systems and movies abroad, and take back dirt-cheap bicycles. Our neighbors the mill workers haven't done as well. Their incomes are scarcely better than they were a generation ago.

To test your commitment to globalism, try out this hypothetical outcome: By 2040 the U.S. drug industry is sidelined as foreign scientists race ahead with cures for cancer, Alzheimer's and diabetes. Envy might make you unenthusiastic about the idea, but your grandchildren would lead happier lives as a result.

If the 150th anniversary issue of FORBES has a list of the world's greatest innovations, I can't be at all confident it won't be a disappointment to America-firsters. I think it will, however, be further proof of the power of capitalism to improve lives.

William Baldwin
EDITOR

# WHY NOT BE THE FIRST ON YOUR BLOCK WITH A SHIFT-ON-THE-FLY DATA CENTER?

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# READERS SAY

## Report Card

"The Story They All Got Wrong" *(Nov. 25, p. 124)* is actually remarkably accurate. While there are some exceptions to the rule, a simple review of the heads and founders of major publicly traded corporations (many of whom are college dropouts), as well as the owners of countless privately held businesses, demonstrates that college education is not a prerequisite to American success.

DAVID BATSON
*Stephenville, Tex.*

You fail to acknowledge other government research that concludes that more education causes higher incomes. The Council of Economic Advisers wrote in its annual report in February 1996: "Each additional year of formal schooling is associated with a 5 to 15 percent increase in annual earnings later in life." Instead you have set up a straw man—one Census Bureau study—and knocked it down with one mighty blow. But there is plenty of academic evidence that suggests that education leads to higher earnings.

JONATHAN ORSZAG
*Marina del Rey, Calif.*

## Rate of Change

"Protect Your IRA" *(Nov. 25, p. 250)* gives the impression that the five-year clock for fixed distribution before you reach 59½ restarts on the date the switch is made to the new rate. Revenue Ruling 2002-62 provides for a one-time change in method that will not be treated as a modification within the meaning of 72(t)(4). It is my understanding that a combination of the time period after the change with the time period prior to the change can be combined to meet the five-year period requirement.

RITA DUBOIS
*Melbourne, Fla.*

## Bad Reception

Thank you for "The Big Picture" *(Nov. 11, p. 141)*. I recently fell victim to the digital TV sales pitch. People need to understand that the standard satellite or cable feeds look terrible on the new digital TVs. After a three-hour conversation with the manufacturer of my TV, they told me I needed to upgrade my satellite to HDTV ($800 for the new system) to get a clear picture and that would only work for HDTV broadcasts. Nobody is telling the truth about these TVs.

ROGER PUCCIO-JOHNSON
*Chicago, Ill.*

## Just Cause

"Witch Hunt" *(Dec. 9, p. 72)* attempts to portray the guilty parties as victims and to paint Eliot Spitzer as having his own conflicts. If he does have these conflicts, he should disclose them. I am thankful that someone is willing to expose the crooked practices and the top company officers who led or condoned them.

JERRY BRANTLEY
*Lubbock, Tex.*

## Clarification

"Pioneers Die Broke" *(p. 258 of this issue)* went to press implying that VisiCalc founders Dan Bricklin and Bob Frankston were on the opposite sides of a legal tussle. We would like to point out that they were on the same side.

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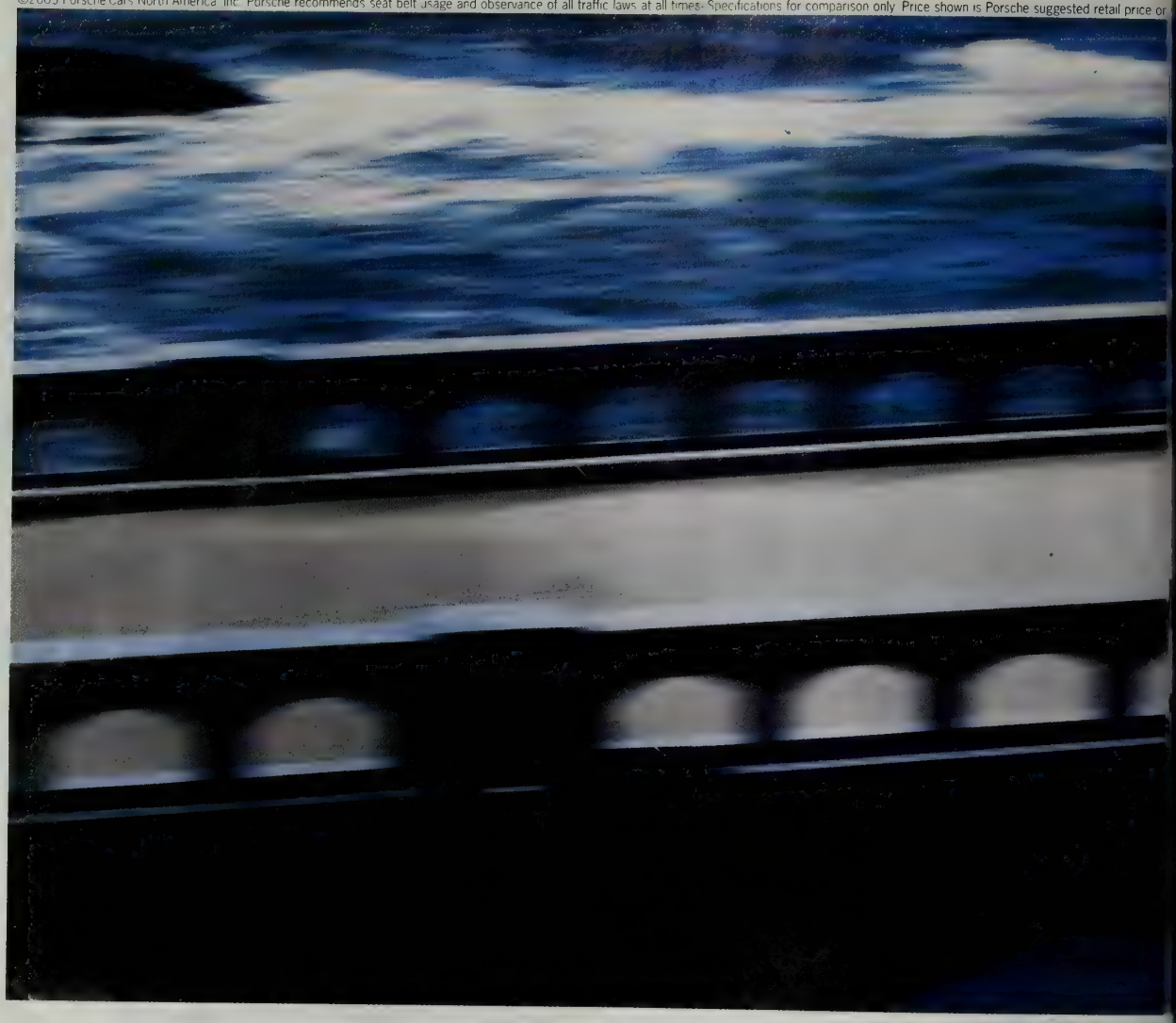

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Steve Forbes, EDITOR-IN-CHIEF

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# Who Woulda Thunk

that high-tech stocks would lead the market's rise from its early October lows?

## Ignorance Is Not Bliss

SK-TAKING IS THE CRUCIAL ELEMENT FOR IMPROVING OUR STANard of living. Most new ideas strike most people as irrational, ndoable, utopian. And most of the time the skeptics are right. But a democratic capitalist system, seemingly improbable ideas can me to fruition. Even if the pioneers don't always reap the rewards, her able executives will develop the ideas, and all of us will benefit.

Ray Kroc, for instance, didn't invent the fast-food phenomnon back in the 1950s. But when he saw the facility run by the cDonald brothers, he quickly grasped—as they did not—the wesomely exciting implications of their techniques in a busiess that was notorious for failure. The idea of creating a chain f thousands of similar restaurants that spanned the globe was, efore Kroc's vision, utterly preposterous.

Today's expensive luxuries and rarities become tomorrow's fordable, widespread commonplaces. Henry Ford's moving ssembly line turned the automobile—once a toy for the rich—nto an essential piece of equipment that any worker could buy.

Yet all too many academics, politicos, bureaucrats and even usinesspeople don't understand that risk-taking is the wellspring f our progress. Well-credentialed economists tell us that the key to rosperity is the government's giving people money or spending eople's money. But the most potent fiscal incentive is reducing arginal tax rates—i.e., the tax you pay on each additional dollar ou earn. America would be impoverished under a tax code that let ou keep, say, your first $20,000 tax-free but levied a rate of 99% on mounts above that, even though the resulting *average* tax rate ould be less than that which we have today.

Central bankers still harbor the illusion that they can constructively guide economies by creating or extinguishing money. Money should be stable in value, just as measurements of distance or time are stable. You don't change the number of minutes in an hour to "stimulate" or "cool off" economies.

Trial lawyers have progressed too far in diffusing the stark difference between fraud and honest business mistakes. Lawsuits are now routine if a company's stock falls significantly or the company reveals an unpleasant surprise. The fundamental concept of limited liability—you can't lose more money than the amount you invested in an entity—is being eroded. You may no longer end up in debtors' prison, but trial lawyers will surely attempt to attach every asset you own.

Corporate directors with M.B.A.s and considerable experience in running businesses have been discovering that in the eyes of the Securities & Exchange Commission they are not qualified to sit on audit committees, because they are not certified public accountants.

Courts too often ignore contracts in the name of their own version of "true" justice. And parasitical trial lawyers have been successfully pillaging more and more of Corporate America, even before this latest spate of executive suite/Wall Street scandals.

Democratic capitalism is moral. You won't long succeed in business if you don't serve the needs or wants of others.

This issue of FORBES should remind us of the inspiring progress made possible by democratic capitalism and—maybe—have us reflecting on what nurtures and harms this awesome phenomenon.

## Congressman Courageous

ASHINGTON REPUBLICANS SHOULD TELL POTENTIAL 2004 GOP ongressional candidates to look to Pat oomey (R–Pa.) for inspiration. Toomey epresents a district that supported both Bill Clinton and Al Gore. His predecessor was a Democrat. Yet Toomey has thrice won this district against stiff competiion. A Jeffords-like liberal masquerading s a Republican? Quite the opposite.

Toomey is an unabashed conservative. He openly supports allowing workers to have, if they wish, a portion of their Social Security taxes go into personal retirement accounts. When Democrats attacked him for this "assault" on the integrity of Social Security, Toomey stuck to his guns. Toomey is a vigorous supporter of the flat tax, even though Democrats allege that it is a giveaway to the "rich." He is prolife, supports term limits, advocates giving patients more control over their health care dollars and has been a stalwart opponent of congressional spending binges. Toomey demonstrates that when Democrats launch their usual class-warfare attacks, conservative principles can triumph if advocated consistently, courageously.

**Pat Toomey (left) with debate moderator and opponent for joust on Social Security and other issues.**

# The Forbes 2002 All-Star Eateries in New York

*Herewith, to mark our 85th anniversary, are 85 nourishing notables picked to palpably please your palate by that perspicacious and penetrating pundit of delectable dining, Tom Jones, and Forbes colleagues Patrick Cooke and Monie Begley, as well as brothers Bob, Kip and Tim.*

★★★★

**Alain Ducasse**
**Aquavit**
**Chanterelle**
**The Four Seasons**
**Jean Georges**
**La Grenouille**
**Le Bernardin**
**Le Cirque 2000**
**Lespinasse**
**March**
**Nobu**
**rm**
**"21" Club**

Affable chef Rick Moonen, who brought Oceana to stellar heights, has opened his own establishment, **rm**, which offers some of the Big Apple's best, most beautifully presented food. **Aquavit**, always very good, has reached new levels of Scandinavian excellence. **La Grenouille** continues as the gold standard of classic French restaurants. **Lespinasse** remains a masterpiece of understated elegance. **Nobu**'s rising sun cuisine burns ever brightly in our Four Star firmament. Two breathtaking surprises in **Alain Ducasse**'s endless procession of perfect courses: the welcoming, warm, country-inn-like service and the bill. **Chanterelle** may have the most inviting dining room in the city for a magical Four Star meal.

★★★

**Atelier**
**Aureole**
**Babbo**
**Blue Hill**
**Danube**
**DB**
**Donguri**
**Eleven Madison Park**
**Etats-Unis**
**Gotham Bar & Grill**
**Gramercy Tavern**
**Honmura An**
**Il Mulino**
**Ilo**
**La Caravelle**
**Lutèce**
**Montrachet**
**Nippon**
**Orso**
**Patria**
**Payard Pâtisserie & Bistro**
**Periyali**
**Peter Luger Steak House**
**The Red Cat**
**River Cafe**
**Strip House**
**Sugiyama**
**Swifty's**
**Tabla**
**The Tasting Room**
**Union Square Cafe**
**Veritas**
**Wallsé**

The Three Star firmament always experiences a turnover that these days would raise eyebrows at the SEC. Happily, there are lustrous luminaries to replace those that changed categories or fell into the gastronomic black hole. Lots of little, exotic seasonal tastes add up to a zesty *kaiseki* feast at **Sugiyama**. For our money, it's the best bet outside Kyoto. It's hard to go to **Swifty's** without seeing somebody famous and eating very well. **Blue Hill** continues to move up toward the gastronomical summit. The Ritz-Carlton has hit a home run with **Atelier**, a spacious, ultra-glamorous restaurant at its new hotel on Central Park South. **Strip House** is an old-fashioned steakery, where the food is tops and the atmosphere congenial. **Payard Pâtisserie & Bistro** is perfect for first-rate French fare finished off with waist-full pastries. **Babbo**, an oh-so-fashionable Italian eatery, deserves its popularity. **Wallsé** proves that nouvelle Austrian cuisine is not an oxymoron; the food, washed down with Riesling, will have you singing "Edelweiss." **The Tasting Room**, where other New York chefs go to get a great meal, may be the only place in the city where the chef emerges from the kitchen to take a bow, like a fashion designer swanning down the runway. **Aureole**'s superb food and quiet dining provide a welcome relief in this era of boom-box rooms. **Patria**, a daring, experimental, exuberant purveyor of pan-Latin food, is still tops. Chef David Féau is restoring luster to **Lutèce**. **Honmura An** serves super soba in a simple SoHo setting.

# Special

**Artisanal**—Hundreds of varieties of cheese plus plenty of hearty bistro grub in a brightly lit, buzzing Park Avenue spot.

**Blue Ribbon Sushi**—Sensational sushi and sashimi in informal, authentic-feeling Japanese setting.

**Blue Smoke**—Hotter than the grills they're cooking on. The spicy salt-and-pepper ribs are the rave.

**Bolo**—Lively scene adds zest to the already superb Spanish cuisine.

**Brasserie**—Dashing décor with a retro kick, where the winsome waitstaff serve food as flavorable as ever.

**Bull and Bear**—Best men's-club-like lunch in Midtown.

**Café des Artistes**—Erotic murals make magnificent meals even more romantic.

**Café Luxembourg**—Steak frites as good as you'll find in New York. The red banquettes give the place character and comfort.

**Caffe Grazie**—Best bet by far for an excellent, easy meal in Metropolitan Museum neighborhood.

**Chez Josephine**—Nice food in a naughty setting.

**Cipriani Dolci**—Both the bull shots and the steak tartare are tantalizingly memorable.

**Cupcake Café**—Heaven itself would be hard put to offer confections as scrumptious.

**Gabriela's**—Fabulous Mexican fare.

**Hell's Kitchen**—Mouthwatering Mexican meals will make most theater-district plays seem pallid in comparison.

**Keens Steakhouse**—Clay smoking pipes adorning the ceilings give patrons of this 19th-century-like steakery and saloon anti-PC pleasure. Mayor Michael Bloomberg would not approve, but red-meat-eaters do.

**Kuruma Zushi**—May have the best sushi in the city, but this quintessential experience doesn't come cheap.

**Maya**—First-rate Mexican food in fantastic surroundings.

**Michael Jordan's Steak House**—His Airness may have lost a step on the court, but he is still a wizard in the kitchen. A view of New York at its bustling best.

**Mr. Chow**—Easy to join the party at this, the friendliest of the scene restaurants.

**Mr. K's**—A most elegant Chinese restaurant; perfect for pampering clients and others you deem worthy of impressing.

**Nam**—Fun, young, happening TriBeCa Vietnamese foodery.

**Osteria del Circo**—Bright, lively, informal. Excellent eats are embellished by celebrity sightings.

**The Park**—Rollicking setting, whether you're a party of 2 or 20 at this "party on" place.

**Pastis**—Delicious, boisterous, trendy. Lip-reading skills are a plus here.

**Petrossian**—Deliciously decadent array of caviar with blinis and flutes of Siberia-like chilled vodka.

**Pinocchio**—Tiny gem combining a delightful menu and country-style atmosphere. It will make a hit with your guests without your having to sell depressed stock.

**Popover Cafe**—Soda fountain of your childhood, where great sodas are pulled and sundaes are built sky-high. Kid-friendly. Sunday brunch worth the wait.

**The Restaurant on the Vilar Grand Tier**—The fare is worth singing about in this eatery at the Metropolitan Opera House.

**Salaam Bombay**—Indian food that will tingle your taste buds.

**Second Avenue Deli**—Superb appetite-satisfying-size sandwiches and other kosher dishes.

**Serafina**—Trendy place for pricey, tasty pastas and pizzas.

**Serendipity 3**—A fantasy fest for those things nutritionists nag you not to eat, such as hot dogs, ice cream and French toast.

**Sparks Steak House**—Regular guys hang out for outstanding steaks and a wonderful wine list.

**Tao**—Hip, happening, not-for-the-fainthearted Midtown scene restaurant delivering exemplary Asian cuisine.

**The Tonic**—Marvelous American menu will have you waving the red, white and blue.

**Tribeca Grill**—High-energy eatery offering admirable American fare.

**Turkish Kitchen**—From the fried calamari to the baklava you'll enjoy offerings that would make even a sulking sultan smile.

**Washington Park**—Sublime experience, from appetizers to desserts.

**Zitoune**—Happy, friendly corner of Morocco right in the middle of Manhattan's modish meatpacking district.

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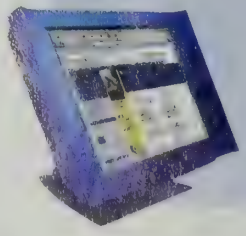

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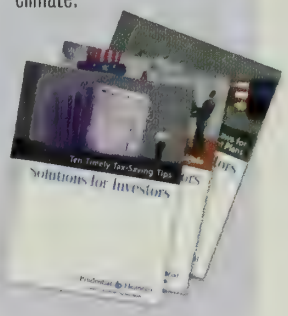


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*I don't know what you think about anniversaries. I like them, being always minded to drink my cup of life to the bottom, and take my chance of the sweets and bitters.*

—THOMAS HENRY HUXLEY

**Straight-Talkers** We need to have an honest debate about what to do about Social Security. The number of workers per retired person is declining sharply due to lower birthrates and much greater longevity. Thus, it is a mathematical requirement that changes must be made in the system. There are many alternatives, such as increasing taxes, increasing the retirement age, cutting benefits, investing part of the payroll tax in private securities to get higher rates of return, etc. Senator-elect Elizabeth Dole of North Carolina and others showed that voters will reward politicians who are honest and thoughtful concerning Social Security, even though they may not agree with every aspect of the proposed solution.

Reasonable and honest people can disagree about how to fix the system. What is not reasonable or honest is to attack an opponent's solution without presenting an alternative solution, or using false assumptions and numbers in the debate. One thing the election showed is that the electorate is increasingly impatient with those politicians who misstate economic facts and do not present constructive solutions.

—RICHARD W. RAHN, Discovery Institute, *Washington Times*

**Satisfaction *Not* Guaranteed** When was the last time you stayed awake at night worrying about the quality of food in your local grocery store? Most people don't think about that. The reason is because of consumer choice and competition. If a grocery store starts to sell bad food, it will lose customers. Most have a "satisfaction guaranteed" policy. If the customer doesn't like something he bought, for any reason, the store will refund the customer's money. That doesn't happen in public schools. Customers—students and parents—may walk away, but the money stays.

President Bush's ideal of a quality teacher in every classroom can best be realized by unleashing the same power that gives us quality food, cars, doctors and plumbers. That power is free enterprise. Consumers making choices is what drives quality up in every other economic sector. Education is no different. Scho choice options, implemented at the state and local levels, are th key that will make the President's vision a reality. Without fre enterprise, no amount of federal money or government mar date will make much difference.

—DAVID SALISBURY, Cato Institu

*"Yes, sir, fat free—straight from the gym."*

**'Twas Ever So** These are times in which a genius woul wish to live. It is not in the still calm of life, or the repose of pacific station, that great characters are formed ... Great necess ties call out great virtues.

—ABIGAIL ADAMS, letter to John Quincy Adams, 178

**Paying the Price** Now more than ever, the resolution the North Korean problem appears only possible with the en of the Kim dynasty. How that will happen, admittedly, remai a matter of debate—not least because Kim has always held Seo hostage to his artillery. Still, the very idea itself is resisted i South Korea, because the cost of bailing out the North's eco omy supposedly is too high. But let's get this straight: Japan no may be considering up to $10 billion in aid to a Pyongyang th will always be dangerous so long as there is Kim. Seoul may b willing to pony up some, too. Then there's the money spent—indefinitely—on South Korea's military and on U.S. forces ther Add to that the cost of American bases in Japan. Against all tha how much are we short? Yes, it will cost lots to end North Kore But in the calculus, the danger of Kim's remaining is greater.

—*Far Eastern Economic Revie*

**Democracy of Indecision** When ordering lun the big executives are just as indecisive as the rest of us.

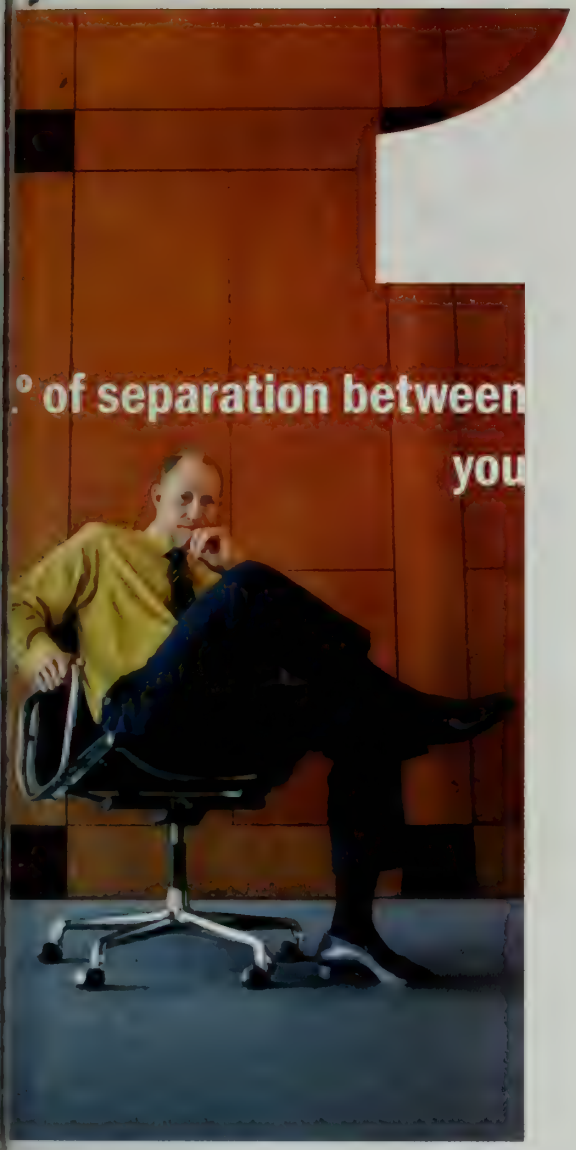
—WILLIAM FEATHER, *The Business of Li*

**Drill!** The election is over, and Mr. Bush has a majority, hov ever slim, in both houses of Congress. Thanks to close pa within the Bush team, I can now reveal what he has in mind f the second part of his term and for the new Congress. (Hir Some people may not like it.)

- Drill for oil in Berkeley.
- Drill for oil in Central Park, New York.
- Drill for oil in Barbra Streisand's living room.
- Drill for oil in Aspen.

I think there must be more of a list than this, but it's ce tainly a start to the kind of America that will make Barbra final keep her promise and leave the country. So will someone mal sure she reads this?

—BEN STEIN, *Wall Street Journal*



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Source: *Gartner*, "How Web Services Mean Business," W. Andrews, D. Plummer, D. Smith, May 9, 2001

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rnesto Zedillo, FORMER PRESIDENT OF MEXICO
CTOR, YALE CENTER FOR THE STUDY OF GLOBALIZATION

# Lula: The End of Latin American Populism?

HETHER AUTHORITARIAN OR DEMOCRATIC, RIGHTIST OR LEFTIST, pulism has been the most pervasive political ideology in Latin nerican politics for nearly a century. Yet populist leaders, while remely effective at attracting mass support, have also contributed isively to the region's failure to develop economically and politi-ly. Populism, especially when practiced by undemocratic leaders, s been one of the biggest impediments to the adoption of policies t these countries need to meet their peoples' aspirations for well-ng and social justice. Populist leaders exhibit an eloquent, charis-tic and unlimited capacity to promise a better life for their people nply by wishing for it—never as the result of discipline, thrift and rd work. In practice the populists' expansionary policies have usu-y delivered short-lived prosperity, immediately followed by painful ancial collapse. This reality, coupled with the socially divisive etoric loved and employed by populists, has sometimes led to olence and opened the door to even worse authoritarian regimes.

## teresting Evolution

fore this year, Luiz Inácio "Lula" da Silva had campaigned successfully for Brazil's presidency three times, each on a pop-st platform. Consequently, when polls showed him to be prac-ally undefeatable in this year's election, it should have come as surprise that foreign and Brazilian investors became anxious, th the real depreciating 33% in just four months and interest es increasing over levels already devastatingly high. (The mar-ts' overreaction to Mr. da Silva's electoral popularity was also a llover effect from Argentina's irresponsible default on its for-n debt last December.) In one respect at least, polls and markets re both right: Mr. da Silva was elected by a huge margin. The estion now is whether the usual tale of populist failure will peat itself this time around. The short answer is no. I sincerely lieve that, paradoxically, the president-elect will prove both the eptical markets and his now-enthusiastic grass-root supporters rong. And he will disillusion his abundant populist fellows roughout Latin America who feel redeemed by his election.

To begin with, Mr. da Silva has already shown that in spite of his e-2002 rhetoric he is far from a traditional die-hard populist. They ually stick to their guns to the end, disconnected from the harsh mands of reality. During his campaign and certainly since his elec-n, da Silva has shown a remarkable capacity for rapidly endorsing licies that he had not so long before vigorously opposed. I submit at in addition to being a charismatic politician he has evolved into esponsible one. My guess is that his sense of duty has led him to cognize how challenging his country's situation is.

Brazil's public debt is huge in proportion to its GDP and is either denominated in foreign currency or has floating interest rates that adjust at the (usually nervous) pace of the market. Every time there is an erosion of confidence, the real is devalued and domestic interest rates rise. When that happens, both the cost and the domestic currency value of Brazil's public debt increase. Investors' fears of default, or at least of forced restructuring, will grow exponentially until these vicious debt dynamics are reversed.

## Facing a Serious Dilemma

Growth in the debt must be halted or a full crash is inevitable. But the debt explosion can only be halted by sound policies that boost confidence, thereby strengthening the real and reducing interest rates. Should da Silva fail to do this quickly, he will be faced with further devaluation of the real, higher interest rates, a massive run on the banks, capital flight, cancelation of foreign credit lines, forced suspension of payments, widespread bankruptcies, ruinous levels of inflation and dramatic increases in unemployment and poverty, as well as social and political unrest.... Quite simply: hell.

To be honest, though, the alternative is not heaven. To restore confidence and put Brazil's economy back on a path to growth—necessary if social demands are to be met—Mr. da Silva will have to implement policies that will be anything but popular. He will have to further slash government expenditures, even in socially and politically sensitive areas; raise tax revenues; provide formal and effective autonomy to the central bank; and accelerate structural reforms to make the economy more competitive. These changes will displace powerful and long-standing vested interests. Frankly speaking, Mr. da Silva must dose his country with even more bitter medicine than that prescribed by the International Monetary Fund in August. This strategy will erode his popularity in the short term, but the alternative—the populist road, whose destination is meltdown—would be far worse socially and politically. If the new president takes the path of prudence, my bet is that his popularity will recover well before the end of his four-year term. If he does not, his current wealth of political capital will be wasted and unrecoverable.

Consider a fascinating corollary to the president-elect's dilemma. If da Silva follows his old populist ideas, Brazil's crisis will surely become so awful that the populist dictates will be severely discredited. If, however, he does what it takes to save Brazil from this nightmare and return it to healthy economic growth, populism will also be disgraced. The international community, especially the U.S., must help President Lula—with generous financial support—to become the unwitting hangman of Latin American populism. F

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*Ernesto Zedillo, director, Yale Center for the Study of Globalization, former president of Mexico;* **Lee Kuan Yew**, *senior minister of Singapore; and* **Paul Johnson**, *eminent British historian and author; in addition to Forbes Chairman* **Caspar W. Weinberger**, *are now periodically writing this column. To see past Current Events columns, visit our Web site at* **www.forbes.com/currentevents.**

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Rich Karlgaard, PUBLISHER

# American Innovator

RY TO IMAGINE A BUSINESS IN WHICH INNOVATION IS NOT A ood thing, but a trapdoor to hell. Aviation, please step forward. ince WWII only Learjet and Robinson have succeeded as major ew U.S. players, and the latter makes helicopters, not airplanes. Howard Hughes, that old daredevil, said it best: If you want to nake a small fortune in airplanes, start with a big fortune.

This is why I love Vern Raburn of Eclipse Aviation. Aware of he industry's awful startup record, he proceeds anyway. This uy follows his heart. He carts his *cojones* in a wheelbarrow.

Raburn *(see* Digital Rules, *May 29, 2000)* wants to build a ocket jet that cuts through the sky at 408mph and seats five pas-engers. Raburn says he can sell his jet, the Eclipse 500 (available arly 2004, if all goes right) for under 900,000 and turn a profit. Context is eeded here. The cheapest certified jet on he market today is Cessna's slightly larger Citation CJ1. This screamer also seats five assengers and goes 440mph, but it sells or $3.6 million—four times the cost of n Eclipse 500. Think of a brand-new Mercedes S600 for ... $29,000. A Big Mac or ... 50 cents. That gives you an idea of what Eclipse is attempting.

**Cheap air taxis: Vern Raburn of Eclipse wants to offer a new deal for the business traveler.**

Skeptics abound. The inventor Dean Kamen of Segway fame, a jet owner and pilot himself, was an early doubter that Eclipse's original beer-keg-size 80-pound twin engines would pack sufficient power. "I don't see how [the plane] can climb if one engine fails," Kamen told me in October. Turns out he was right.

History likes to sanitize innovation. It edits out all the haunting doubts, the midnight sweats. It bowdlerizes the day-to-day humiliations borne by every entrepreneur, such as raising money and overcoming goof-ups. Eclipse has made remarkable progress ince I wrote about it 31 months ago. But Raburn's startup has lso taken its lumps, one of them—the engine—huge.

## Two Steps Forward, One Back

Curious about an update, a friend and I flew our dinky single-propeller airplane to Eclipse headquarters in Albuquerque in ate November to catch up. We rolled up to Eclipse feeling like Charles Lindbergh and Antoine de Saint-Exupéry, ready to meet he new Howard Hughes.

The new Hughes stands about 5 foot 7 and wears thick glasses. With his clothes and his pallor Vern Raburn looks like a Seattle software nebbish, which he once was. In fact, one big veapon Raburn brings to Eclipse is his connection to software billionaires such as Bill Gates and Paul Allen. These friendships have allowed Raburn to raise $238 million thus far. Access to capital is not a risk factor for Eclipse. The big risks are these: a new jet engine borrowed from the military that failed its early tests, and a heretofore nonexistent market for tiny air taxis.

• **Big Risk Factor No. 1:** The failed engine is the EJ22, made by Williams International. The technology works fine in the Navy's cruise missile, but for Eclipse has proven problematic—not enough thrust and too delicate to withstand stresses such as bird strikes. The prototype Eclipse 500 that was flown in Albuquerque in August was grounded. Sure enough, five days after our visit Eclipse announced it had dumped the EJ22 and severed its ties with Williams. The best guess in aviation circles is that the Eclipse 500 will need engines that are heavier and more robust—250 pounds, not 80. This will cut the jet's range from 1,300 nautical miles to 1,000 and push up operating costs from 56 cents per mile to 75 cents. Raburn insists that interest in the Eclipse 500 is so high that other enginemakers (possibly GE, Honeywell and Pratt & Whitney—Raburn won't say) are vying for the Eclipse order.

• **Big Risk Factor No. 2:** How many orders will that turn out to be? Raburn sees a booming market for air taxis—microjets, on call, ready to fly business travelers out of America's 5,000 smaller airports for a price equal to a full-fare coach ticket on United Airlines. Want to fly from Palo Alto to Santa Monica? Your options are limited and costly. You'd need your own jet or charter. But tomorrow, if Raburn is right, you'll call up a (relatively) cheap air taxi. Raburn claims three nascent air taxi services have ordered more than 2,000 Eclipse jets.

Thousands of pocket jets! Can Eclipse handle that kind of volume? I think so. A tour of Eclipse's factory floor in Albuquerque is a journey deep into the 21st century. There, an Eclipse 500 can be assembled in 9 days—that's 12 fewer than it took to assemble my Cessna Skylane. Eclipse has yanked out about a thousand labor hours per jet with a process called friction-stir welding. This cuts out the need for rivets—along with Rosie's labor.

In one respect Raburn is like any other innovator you've ever met and Eclipse like any other startup—big dreams, gritty reality. Innovation, you see, is never an immaculate conception. It's always messy, bloody and hard-fought. Plucky Vern Raburn is worthy of notice in this FORBES issue celebrating innovation. F

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# No Housing Bubble Here

THE IMPLOSION OF THE stock bubble has given rise to the notion that residential real estate could be next. Home construction starts fell in October to their lowest level in six months. Despite the fall market rally, builders' stocks are down.

But according to Laurence Hirsch, chief executive of home builder Centex, all this pessimism rests on a rotten foundation. "It's irrational fear," he says of the bubble talk. October was a blip due to weather; housing affordability remains benign and interest rates are low, he contends.

Centex's Laurence Hirsch thinks home building is brick-solid.

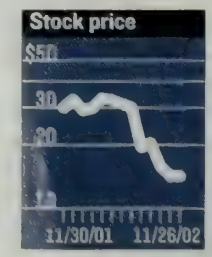
Macro questions aside, **CENTEX (51, CTX)** is a good buy. The nation's fourth-largest home builder, it has performed handsomely, with net earnings growing 21% to $203 million for the fiscal year's first half ended in September, on revenue up 9% to $3.9 billion. And (for now) the future looks good: Orders for new homes surged 42% in October from October 2001. Dallas-based Centex is strong in states like Texas and Florida.

Better, Centex is not entirely reliant on the cyclical construction business for its profits. A third of those come from home building services such as home finance (mortgages and home equity loans) and pest control, as well as construction services. Off sharply from its 52-week high of $63, Centex can be had for a cheap seven times trailing earnings. Deutsche Bank Securities analyst Gregory Nejmeh expects those earnings, for the fiscal year ending next March, to climb 31% to $8 a share. *—Robert Lenzner*

## Withdrawal

INVESTORS ARE YANKING MONEY OUT OF **CONCORD EFS (15, CE)**, the industry leader in the processing of ATM and other electronic transactions. Concord is down 57% this year, from a May high of $35.

The worry is that Concord's 25% operating margin will come under pressure as competition from Visa and First Data stiffens and some of Concord's ATM contracts come up for renewal in 2004. Concord is now signing up big discount retailers like Wal-Mart and Dillard's, which have the



verage to demand favorable terms. Con-
ord is also the subject of ugly rumors: It
as issued two statements since August
ying it has no plans to restate earnings,
nd is not under investigation by the Se-
urities & Exchange Commission.

Still, Concord's earnings jumped 67%
$212 million in the nine months ended
ept. 30 on $1.5 billion in revenue. Its
oard has approved $500 million in buy-
acks this year. Gary Prestopino, vice pres-
dent at Barrington Research, says this
tock is still cheap at 23 times trailing
arnings. —*Emily Lambert*

## Sound System

**ARMAN INTERNATIONAL (60, HAR)** MAKES
ancy audio gear for everywhere from sta-
iums and churches to cars and homes.
ounded a half-century ago by 84-year-
ld Chairman Sidney Harman, this is one
f the few remaining U.S. firms at the fore-
ront of audio electronics.

Its Harman Kardon, JBL and Infinity
rands have found new growth recently in
ystems for personal
omputers and cars
Toyota, Daimler-
hrysler). So Har-
man boosted net in-
come 78% to $58
million in the June 30
iscal year on sales of
$1.8 billion. In the September quarter earn-
ngs rose 95% to $10 million.

Although the stock is up 40% this year
and costs 31 times trailing earnings, Craig
Callahan, chief investment officer for the
Icon family of mutual funds, rates it a buy;
he expects a fiscal 2003 net of $2.98 a
share. —*Christopher Helman*

## Still Healthy

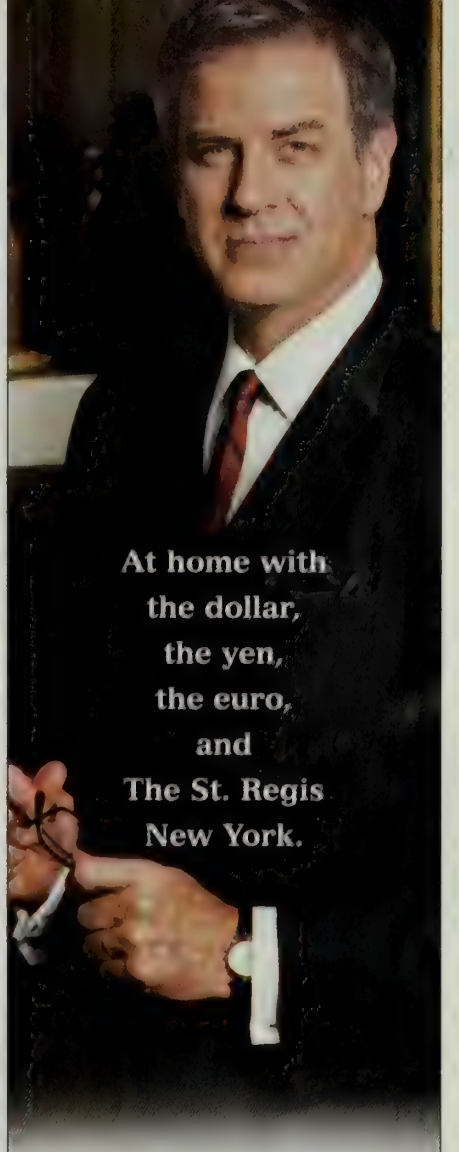
PROBLEMS AT TENET HEALTHCARE AND
Cigna have sent health care stocks reeling
lately. Federal auditors are probing Tenet
amid accusations it inflates Medicare
billings, while Cigna has been telling Wall
Street to temper expectations for earnings.
**WELLPOINT HEALTH NETWORKS (70, WLP)**
is not without sin: The managed care
provider recently paid a $9 million settle-
ment for Medicare overbilling. Its shares
have dropped 19% since October. But
Philip Dow of RBC
Dain Rauscher says
WellPoint appears
clean overall. The
company has climb-
ing membership and
saw net income dou-
ble to $211 million
in its September quarter on revenue of
$4.5 billion. WellPoint trades at a nice 16
times earnings. —*Daniel Kruger*

## How Quaint

AS A HOME FURNISHINGS CHAIN,
**RESTORATION HARDWARE (8, RSTO)** prefers the
classic American look. The stock is up
28% this year. Struggling to avoid Chapter
11, and under President Gary Friedman,
brought in from Williams-Sonoma, the
105-store retailer has a classic business
problem: lots of competition. It is working
a tough niche against the likes of Pottery
Barn and Crate&Barrel.

Then there are the accounting ques-
tions. Restoration claims that losses are
shrinking, to $13.2 million for 2002's first
three quarters, from $24 million for the
year-before period. But the company
would have shown less progress without
adding a $13.5 mil-
lion "income tax
benefit" to the bot-
tom line. Restoration
explains that this
bizarre item is a non-
cash number repre-
senting how much it
could save in future profitable quarters by
carrying forward today's losses. If it re-
mains unprofitable, Restoration will be
facing a big charge.

Somehow, the company expects 41
cents a share in the Christmas quarter. But
it hasn't made money since 1998 and lost
45 cents in the 2001 holiday quarter. It has
just $2 million in cash left. Short the stock
and cover at $4. —*C.H.*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By David Farabee, ASSOCIATE RESEARCH PSYCHOLOGIST, INTEGRATED SUBSTANCE ABUSE PROGRAMS, UCLA

# Addicted to Treatment

## Ideology is trumping science in our quest to rehabilitate drug-involved offenders.

IN THE LAST ELECTION D.C. VOTERS OVERWHELMINGLY APPROVED Measure 62, which offers treatment in lieu of prison for certain types of drug-involved offenders. At the same time, voters in Ohio roundly rejected a similar proposition. While this sharp contrast can be attributed in part to a difference in voter ideology, it nonetheless raises the question: What does the empirical evidence suggest is the best course of action for dealing with the growing number of drug-abusing offenders in our criminal justice system?

Like many social issues, public sentiment concerning rehabilitation and punishment of criminals tends to move in cycles. The last major wave of support for treatment occurred in the 1960s and 1970s. But support began to wane after a panel of the National Academy of Sciences concluded in 1979 that few of these treatment programs had a lasting impact on recidivism. A get-tough phase followed in the 1980s and early 1990s, when public cynicism resulted in a decline of support for rehabilitation programs.

Now we've come full circle. A 2001 poll by Peter D. Hart and Associates found that 63% of Americans view drug abuse as a medical problem that would be better addressed through treatment than incarceration. Another national survey commissioned by the American Civil Liberties Union in 2001 found that 40% of Americans believe that the *primary* purpose of prison should be rehabilitation, rather than punishment, deterrence or maintaining public safety.

Most of the ostensibly "grass roots" efforts to divert drug offenders from prison are organized and supported by national groups such as the Campaign for New Drug Policies and the Drug Policy Alliance. Both groups do their job well. They advocate the relaxation or abolition of certain drug laws in favor of more compassionate and treatment-oriented alternatives. But advocacy groups (on either side of an issue) only tell one side of the story.

As an addiction researcher, I am amazed at how ineptly these initiatives have been challenged. The two flagships of the diversion agenda, Arizona and California (the latter will spend $600 million on this effort over the next five years), are touted by proponents as successful models of this approach. Both involve sending nonviolent drug-involved offenders into treatment programs in lieu of incarceration. But neither has produced any solid evidence that they are reducing subsequent criminal activity among participants. In Arizona 40% of those given the opportunity for treatment fail to comply, meaning they do not show up consistently or at all; California's evaluation is just beginning.

*"Shifting the focus of the criminal justice system from law enforcement to treatment presupposes that a cure exists. But the results are mixed."*

Moreover, the popular belief that addiction is a disease and must be dealt with as such remains controversial in the scientific community. If it were not ultimately a choice, why do most addicts who recover do so on their own? And why are programs in which drug users are given money or vouchers for each drug-free urine sample one of the most effective ways to suppress drug use?

Shifting the focus of the criminal justice system from law enforcement to treatment presupposes that a cure exists and we are merely voting to increase its availability. But even today there remains a wealth of research suggesting that the results of the treatment programs are mixed at best. The National Research Council, reviewing research on offender drug treatment in 2001, found that even positive results may be attributable to selection bias. It could be that the self-motivation of the participants who volunteer for the program, rather than the program itself, explains the apparent success.

As more states decide whether to jump on the treatment bandwagon (such as Florida in 2004), we will be better served if we base our course of action on effectiveness rather than ideology. If, in the next few years, Arizona and California demonstrate long-term cost savings and reductions in recidivism, other states would be wise to consider adopting similar approaches. But at that point the decisions can be based on facts, not philosophies. When it comes to protecting our safety, wishful thinking and good intentions just aren't enough. F

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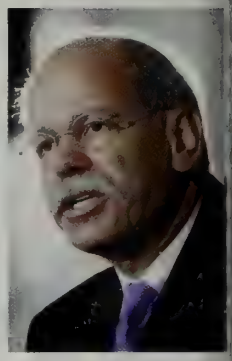
# Other People's Money

## Chrysler has come up with a new way to be a skinflint: get suppliers to pay for its factories. BY JOANN MULLER



GENERAL MOTORS SPENT $600 MILLION LAST YEAR FOR a new Cadillac factory incorporating the latest in flexible manufacturing. DaimlerChrysler wants the latest in assembly lines, too, but without spending the money. Its North American operation is trying to get parts suppliers to pick up most of the tab for a new factory in Windsor, Ont.

Today it's not uncommon for suppliers to build large chunks of an automobile—say, a complete dashboard or a front-end module—at their own factories, and then ship them to the auto plant for final assembly. The new Chrysler plant would take this trend to a logical extreme.

Chrysler is inviting suppliers inside the factory as equity partners. The suppliers, not Chrysler, would assume responsibility for running large sections of the factory, such as the body shop, where steel car frames are welded together by robots. The suppliers, which could include Canada's Magna International or Germany's Dürr, are supposed to supply as much as 60% of the capital to build the plant, specifically the body and paint shops. If they go along, the plant wil be running by 2005.

The project would allow Chrysler to drastically cut its fixe costs, while freeing up more cash to invest in new vehicles that i hopes will boost market share. Maybe even more significant: I should help Chrysler reduce its labor costs as similar project shrink its direct work force in coming years

Chrysler broached the idea in con versations with suppliers this sum mer. But it wasn't until Octobe during contract talks wit

High concept: Chief Dieter Zetsche and Dodge M-80

e Canadian Auto Workers union, that Chrysler settled on anada for a location.

The outsourcing of factory ownership is a sensitive matter, cause it goes hand in hand with the outsourcing of jobs. And bs at supplier factories, even unionized ones, don't pay as well jobs at auto company factories. Hourly workers at CAW-orga-zed supplier plants earn about $14 to $16 an hour, not includ-g benefits, while their CAW counterparts at Big Three factories Canada earn about $17.50 an hour, according to CAW Presi-nt Basil (Buzz) Hargrove. In the U.S. the gap is even larger, out $10 an hour, according to the Center for Automotive esearch in Ann Arbor, Mich.

So why did the union go along with a Chrysler factory not vned by Chrysler? Because Chrysler promised 2,500 new bs—1,000 within its factory and another 1,500 supplier jobs earby. The CAW has seen some 15,000 auto industry jobs elim-ated in Canada since 1999. Hargrove says Chrysler promised at all CAW workers inside the plant would earn top wages, hether employed by Chrysler or by one of its suppliers. And ose at a nearby supplier park would earn wages that are com-etitive with other CAW-represented suppliers. The union also knowledged that Chrysler must find a way to improve its pro-ctivity, which ranks last in the 2002 Harbour Report. It takes hrysler about 31 hours to assemble a vehicle, compared with 5 hours for GM and 18 hours for No. 1 Nissan.

Since its founding in 1924 Chrysler has been a less fully inte-rated auto company than Ford or General Motors. Chrysler hief Executive Dieter Zetsche wants to continue the pattern of utting more design, engineering and manufacturing in the ands of suppliers. "We think this concept should become a enchmark for North America," he says of the Windsor plant.

Likely output of the Windsor plant: a snazzy small pickup uck called the Dodge M-80, aimed at young buyers with limited udgets. Zetsche, while not confirming plans for the M-80, says a ew business model is the only way Chrysler can build entry-vel vehicles profitably and overcome what Deutsche Bank Alex. rown estimates is a $1,600-per-vehicle cost disadvantage com-ared with Japanese manufacturers.

Suppliers are not talking about the Windsor plant, but they e presumably less than thrilled. They are hurting financially as e automakers demand never-ending cuts in component rices. "With some U.S. suppliers, we had a lot of resistance," oncedes Chrysler's chief operating officer, Wolfgang Bernhard.

For good reason. If the vehicle bombs, they've got a lot of pital tied up in the project. But the upside is that by taking ontrol of the plant's body or paint shop, for instance, a supplier an expect a bigger chunk of revenue from Chrysler for years to ome. As equity partners, Chrysler's suppliers would also be ncouraged to put their best technology into the plant without ear that it will be shared with competitors. The suppliers will so be permitted to use their Windsor operations to do side jobs or other auto companies—something Chrysler would never low in a traditional factory. That alone makes the deal more ctractive to suppliers because they can get their money's worth om their investment. F

Fund manager Christopher Davis lashes overgenerous companies.

# Options Vigilantes

**The accounting reformers represented the first wave of attacks. Now money managers are besieging companies that issue executive options.** BY ROBERT LENZNER

TO THE GUARDIANS OF ACCOUNTING PRINCIPLES, THE best cure for wanton stock options grants, which made billions of dollars for insiders before the market came crashing down, is to expense them. Under pressure from politicians, Warren Buffett and the Financial Accounting Standards Board, companies ranging from General Electric to Coca-Cola have taken the pledge this year and started deducting the value of grants from net income. Honesty hurts the bottom line: A Towers Perrin study says that the deductions cut net income on average by 10%.

But that's not good enough for another group of option haters: portfolio managers who think corporations like Microsoft are too generous with employee options. Their beef? Big options awards, which they define as annual awards of options on 2% or more of the common, amount to a transfer of wealth from shareholders to employees. To offset the dilution occasioned by the option handouts, the issuer can, of course, use corporate cash to buy shares in the open

market. But that's cash that could have been paid out to the shareholders as dividends.

The options vigilantes include Christopher Davis, portfolio manager for the Davis Advisors fund group, and William Miller, portfolio chief for Legg Mason funds. If they can't persuade a company to cut up on generous options awards, they dump their shares and make a stink about it.

Davis has been at this a while. The minute Hewlett-Packard began issuing reams of options in the late 1990s, Davis began unloading a 15-million-share position. Lately, though, he has really stepped up the tempo. A year ago Davis unloaded his $257 million stake in General Mills because the food company's 6.9% annual earnings growth over the previous five years failed to justify its options gifts.

By his reckoning, General Mills had, over the five years since 1997, brought in a cumulative $409 million in net income above what it would have made if its earnings had stayed flat. In the same time it ladled out options worth $500 million. All of that growth, that is, had been given away. Worse, Davis complains, the company's annual handouts had accelerated in that time from 2% of the shares outstanding to 4%. "Huge pay for average performance," Davis huffs. General Mills says the increase relates to its Pillsbury acquisition, which doubled the company's size, and pledges that the awards will be lower in this fiscal year.

Charles Munger pressured a tech company to curb awards without success.

The options vigilantes have enjoyed some success. Davis has been ragging on American Express to throttle back on its awards since 2001, when he noticed that it had pumped up options issuance to 3.2% of shares outstanding from 1.4% in 1997. As the second-largest AmEx stockholder, with 50 million shares (Berkshire Hathaway is the largest), Davis had the clout to command several probing sessions with Chief Executive Kenneth Chenault on the options question. In July Chenault relented and announced he would reduce the grants, although he didn't specify by how much. An AmEx spokesman acknowledged that "concern among fund shareholders" was a factor in the shift.

Similarly Legg Mason's Miller believes he has convinced Amazon chieftain Jeffrey Bezos to largely abandon options in the U.S. in favor of restricted stock. Bezos has promised less than 3% dilution in the future and will expense the restricted stock over time.

Charles Munger, Buffett's sidekick and vice chairman of Berkshire Hathaway, has tried in vain to pressure a tech company—he won't say which one—into changing the way it accounts for options. "In 90% of the cases," says Munger, "the handing out of options is excessive." Except, he says, in the case of Costco, where Munger is a director; the reason, he adds, is that the two highest-ranking executives refuse cash bonuses.

The anti-options campaign doesn't always work. McDonald's rebuffed Davis' entreaties, so he dumped his 18 million shares in late 2001 and early 2002. McDonald's, which won't comment on Davis' specific action, says the chain's 2% yearly options giveaway links employee pay with shareholder wealth.

Making managers think like owners is the chief argument for lush options grants. Companies like Microsoft, whose stock has surged over time, use the lure of becoming millionaires to attract talent. Fine, up to a point, says Davis and his ilk. He even scooped up 7 million Microsoft shares last summer after senior executives at the software giant told him that options issuance in the future will be significantly lower than in the past.

But lavish option grants aren't the only way to build a company. Davis notes that good performers like American International Group, General Electric and Johnson & Johnson grant employees options on less than 1% of their equity annually.

## Management's Manna

Sometimes stock buybacks offset the options grants to employees. But either way, critics say, public investors lose.

| Company | Cost of options granted[1] $ | Cost of options granted[1] % of sales | Cost of common shares repurchased $ | Cost of common shares repurchased % of sales |
|---|---|---|---|---|
| Amazon.com | [illegible] | 12.7% | $0 | NA |
| American Express | [illegible] | [illegible] | 628 | 2.6% |
| Capital One Financial | 45 | [illegible] | 0 | NA |
| General Mills | 74 | [illegible] | 2,438[2] | 30.7 |
| Hewlett-Packard | [illegible] | [illegible] | 1,240 | 2.7 |
| Lucent Technologies | [illegible] | [illegible] | 0 | NA |
| Microsoft | 2,474 | [illegible] | 6,069 | 21.4 |

All figures are for most [illegible]
Black-Scholes [illegible]
NA: Not applicable
Source: Company reports

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# Cyburgers

**It's 5:30 p.m. on Monday and 31** customers at a McDonald's franchise in Swiss Cottage, London, aren't buying burgers but time on the World Wide Web. They drop change in an orange self-service dispenser, get back a chit with a number, and use that code to sign on to one of 78 PC screens in the fast-food outlet.

This is the latest entrepreneurial foray of Stelios Haji-Ioannou, the colorful 35-year-old who has built Europe's "Easy" empire of companies, including the hugely successful discount airline, EasyJet. Stelios' talent is for using technology to strip unnecessary costs from old-fashioned industries. He uses yield-management software and bargain prices to get people to use planes, cars and PCs in off-peak hours.

Something like that is going on at the McDonald's experiment in Swiss Cottage. Stelios is renting some 35% of the fast-food outlet's underutilized floor space. The franchisee needs traffic, particularly in the slow hours between meals, and Stelios needs choice real estate to resuscitate his troubled Internet cafes. Stelios has sunk $130 million into his own 23 large wired and branded cafes, called EasyInternetcafe.

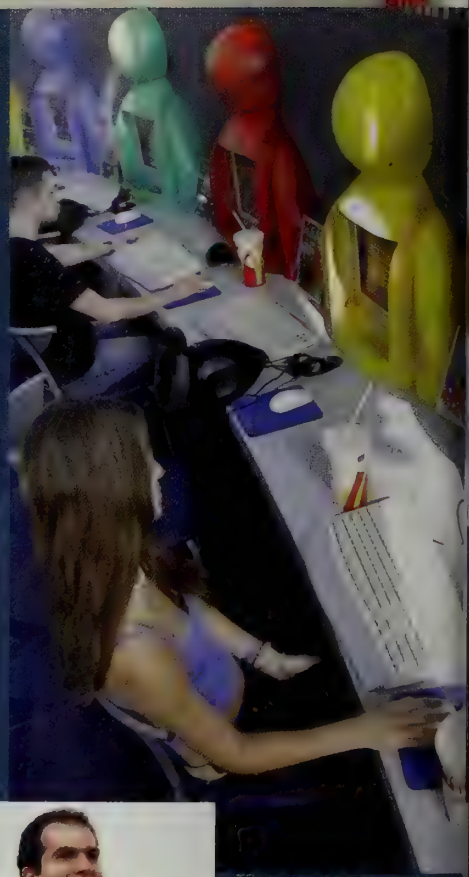
Stelios says the challenge is to get his smaller, stand-alone Internet concessions into libraries, airports, hotels, bus stations, restaurants and cinemas, and franchise the chain as much as possible. Grandiose goal: 2,000 outlets within three years.

Enter McDonald's. Chief Executive Jack M. Greenberg is fishing around for innovative ways to arrest McDonald's slide in traffic, and in some countries its operators are already well ahead of Stelios in using the Internet to draw traffic. McDonald's in Brazil, for example, offers "McInternet," PC screens in colorful round plastic modules. So why does McDonald's need Stelios?

Stelios hopes McDonald's might be interested in outsourcing the PC maintenance operation, pointing to his staffless token dispenser. A McDonald's U.S. property executive brushed off the billionaire. So Stelios is launching a second pilot outlet at a busy Burger King on Piccadilly Circus.

"McDonald's has 30,000 stores around the world," he says, "but how many are they prepared to give me for me not to do it with their competitors?"

—*Richard C. Morais*



**Chips and fries: Billionaire Stelios Haji-Ioannou, and a wired McDonald's in Israel.**

# PET Project

**Little noticed until it was hit by a corporate scandal, Syncor now has to convince folks that it still has a future.** BY SETH LUBOVE

WHEN HE WAS NAMED AN ERNST & YOUNG Entrepreneur of the Year last year, Monty Fu's life work in creating Syncor International, a specialty drug distributor, was finally recognized. Then when Cardinal Health agreed last June to pay $1.1 billion (including assumed debt) for his Woodland Hills, Calif. company, Fu, 56, was about to be rich, too. Now, just months later, he's on leave from his company, his career in tatters following charges by Cardinal that he and his brother Moses made more than $500,000 in illegal overseas payments in Taiwan and six other countries. Plaintiff lawyers are circling, and the company has set aside $2.5 million to cover fines. Fu isn't talking.

A sad demise for a proud businessman, if hardly unusual these days. But for Cardinal the revelation may be a blessing in disguise. The company has reopened negotiations to acquire Syncor, whose stock fell 24% when it revealed the alleged payments in November. (Expected 2002 sales including discontinued operations: $1 billion.)

Why would the squeaky-clean Cardinal even bother with these guys at this point? Besides the ethical issue, a lopsided

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41% of Syncor's sales depends on the preparation and distribution of just one product, Bristol-Myers Squibb's popular heart diagnostic drug Cardiolite; the arrangement is up for renegotiation next year.

The answer lies in the market that Syncor dominates. It has more than half of the $1 billion business making and distributing specialized nuclear pharmaceuticals. These are the lightly radioactive drugs used most often for noninvasive diagnostics such as CAT scans and the like. Syncor has jumped into the hottest part of that market: making the radioactive tracer used for positron emission tomography machines, which reveal the metabolic processes taking place at a particular spot inside a patient's body. The Association of Molecular Imaging estimates that the annual volume of PET scans, which cost from $1,200 to $3,500, has increased by 50% since last year to 525,000.

Syncor makes the radioactive fluorodeoxyglucose that is injected into the patient prior to the PET scan. Cancer cells are voracious consumers of

**Syncor dominates the business of making drugs used for noninvasive diagnostics.**

glucose, which allows the PET to pinpoint the cancerous hotspots. The concoction is made in a cyclotron, a refrigerator-size version of a particle accelerator that uses powerful magnets to strip out ions from hydrogen molecules, leaving only high-energy protons. The protons are attached to oxygen molecules, which, in turn, are tagged to glucose. It costs $2 million just to construct the cement room that protects the cyclotron, which itself costs another $2 million.

"Home Depot does not have them in stock," deadpans Michael Mullin, general manager of Syncor's PET business.

The trick is preparing and getting the stuff into the patient within the 110-minute half-life of the material, a task that plays well to Syncor's strengths. Every day Syncor's small army of 1,850 technicians and couriers speed drugs from 149 locations in the U.S. and overseas, putting 125,000 miles on the company's fleet of unmarked vehicles. Although a smaller [illegible]tor, CTI Molecular Imaging, is significantly [illegible] PET with 37 cyclotrons to Syncor's 10, it [illegible] have the wide distribution that Syncor does. [illegible] or Charlton [illegible]ston, is push[illegible] health insurance [illegible]verage of PET scans for Alzheimer's. A[illegible]egations [illegible] impropriety don't stop this kind of potential. F

# Bottoms Up

**Two years after its introduction Smirnoff Ice has practically** become a household name. Unlike distilled spirits, the lightly carbonated, citrusy malt drink can be advertised on television and radio, and it's widely available in delis and grocery stores. The so-called malternatives market, including brand names like Jack Daniel's Hard Cola, Skyy Blue and Bacardi Silver, is gaining ground on beer and is today good for $2.5 billion a year.

So leave it to the feds, under pressure from state regulators, to crash the party. The government worries that the consumer is led astray by the well-known brand names, and buys a malt drink thinking it's hard liquor.

"These new drinks have no malt characteristics and use spirits' brand names," complains William Foster, deputy chief of the regulations division at the Bureau of Alcohol, Tobacco & Firearms. "This is creating confusion to customers."

The ATF's proposed solution: Require manufacturers to change their formulas so the drinks contain less alcohol from spirit origins—or be classified as a spirit. States say the malternatives now are neither beer nor hard booze, but rather a combination: a malt (beer) base, with ethyl-alcohol-based flavorings that contribute nearly 90% of the alcohol content of the drinks. The total alcohol content is around 4%, more or less the same as beer. Under current regs the contribution of alcohol from flavorings is unlimited in beverages with alcohol content of 6% or lower; the ATF is now proposing to limit that contribution to 0.5%.

The Flavored Malt Beverage Coalition thinks the ATF ought to sober up. "Malt beverages have contained [significant amounts of] flavorings for nearly 30 years," says Marc Sorini, counsel to London-based Diageo, which markets Smirnoff Ice. He also points out that each of the malternatives on the market was approved by the ATF.

The drinkmakers suspect that either the beer industry, whose sales are flat, or the liquor distributors, or both, are behind the pressure.

If the ATF does change the rules, any reformulation would be disastrous, says Brian Sudano, an analyst at Beverage Marketing, a consulting firm. "It's hard to have a palatable product with only malt," he says. And as a distilled spirit, the drink could be sold only in private and state liquor stores, and the makers would be taxed at a higher rate. This could be a business on the rocks all because the government thinks you can't read a label.

*—Heidi Brown*

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# Special Purpose Vehicle

## Why did U-Haul have an off-the-books entity hold title to its storage centers? BY NATHAN VARDI

THE SHOEN BROTHERS HAVE HAD SO MANY SQUABBLES over their U-Haul International they ought to keep a family therapist on staff. After founder Leonard Shoen distributed the company's shares to some of his 13 children many years ago, the children repaid him by fighting bitterly among themselves and later forcing Dad out. Leonard committed suicide in 1999.

Now son Edward (known as Joe) is chief executive of U-Haul's owner, Reno, Nev.-based Amerco. The latest fight, with hints of accounting shenanigans, poses the risk of a bankruptcy filing by spring if Joe can't ward off banks and bondholders.

In October Amerco defaulted on $1.2 billion of debt. Paul Shoen, who holds 4.8% of Amerco, continued the family tradition by suing brothers Joe, James and Mark (who own a combined 42.3%). He accuses them of bingeing on publicly-traded Amerco's assets, using what in Enron jargon is called a "special purpose entity."

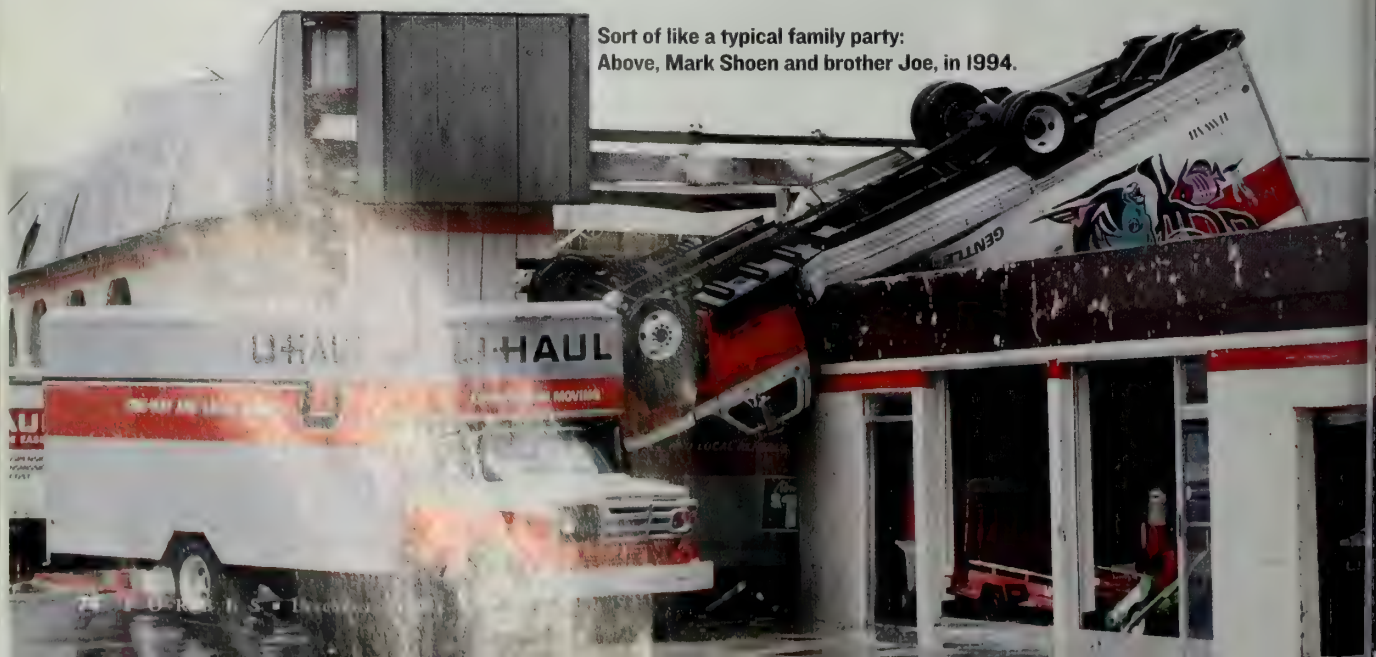
In grand 1990s style, Joe, James and Mark set up SAC Holdings, a company with no employees and an office in Mesa, Ariz. that held other corporations. SAC would eventually become wholly owned by Mark, who is president of U-Haul's Phoenix operations. Over the years Amerco sold 225 properties to SAC for $575 million in cash and debt. SAC also bought about 120 other properties from third parties for roughly $425 million. Most of these were storage depots that are strategically located next to U-Haul rental centers. The deals were backed by investment banks such as Merrill Lynch and UBS Warburg, which lent SAC $500 million. But Amerco financed the deals, too, accepting promissory notes with a balance that recently totaled as much as $463 million.

Before Enron imploded, such arrangements were standard stuff. Amerco got its hands on fresh cash and was able to report management fees from SAC ($8.3 million in fiscal 2002). SAC, owned by Mark rather than Amerco, was sufficiently distinct that Amerco didn't have to consolidate its finances on Amerco's books. Paul, though, argues that the distinction was motivated by more than a need to separate the accounting: He says his brothers siphoned $200 million from Amerco by, for example, using SAC to obtain properties at below market value. Amerco management calls this accusation baseless.

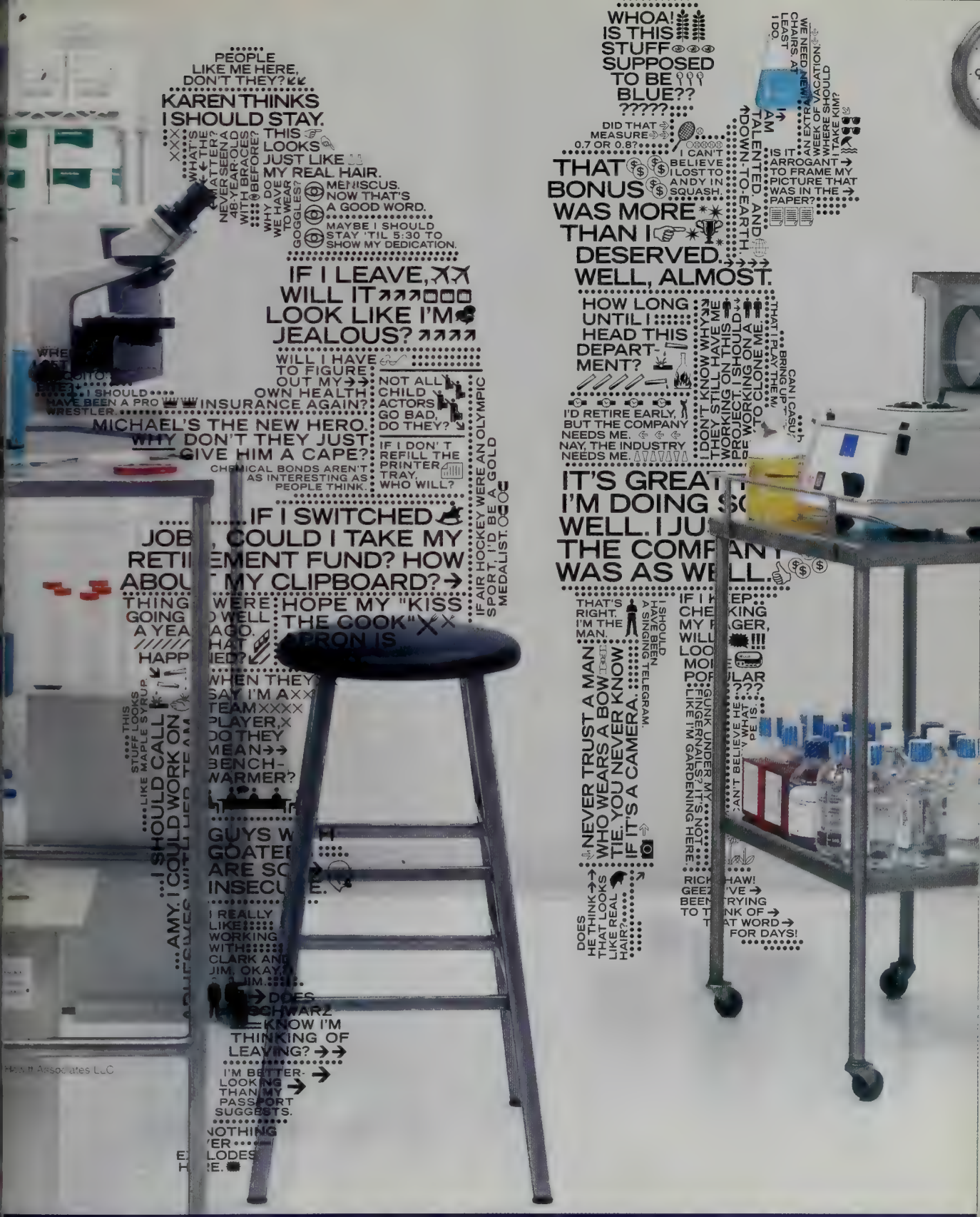
By early 2002 PricewaterhouseCoopers, Amerco's auditor for 24 years, could no longer turn a blind eye. The accountants told Amerco to consolidate SAC on its financial statements. The results, despite Amerco's original assurances, were ugly: In July Amerco restated two years of numbers, lowering 2001 net income 92%, to $1 million (on $1.9 billion revenues), largely because of depreciation charges, and increasing the debt on Amerco's balance sheet by $558 million, to $3.3 billion. Amerco then fired PwC.

Amerco's lenders were getting nervous, too. J.P. Morgan Chase negotiated Amerco's expiring $400 million bank line down to $205 million, giving Amerco little room to maneuver in October, when it had to redeem $100 million in bonds. Amerco defaulted on much of its debt. It struck a standstill deal with its banks in November and started a search for funding. Now, principal payments on $175 million in bonds due in May loom large.

Amerco's stock has dropped 75% this year to $4.65, causing the net worth of Joe, Mark and James to fall a collective $127 million. That the three have not been selling stock over the years puts them ethically above the characters running Enron. Still, the $13.7 million in commissions that Amerco paid SAC during fiscal 2002, even though SAC didn't perform any duties for Amerco, and the $3.2 million Amerco annually pays for printing services to Form Builders, a company owned by Mark, his daughter and Joe's sons, don't look too good. F




**Sort of like a typical family party: Above, Mark Shoen and brother Joe, in 1994.**

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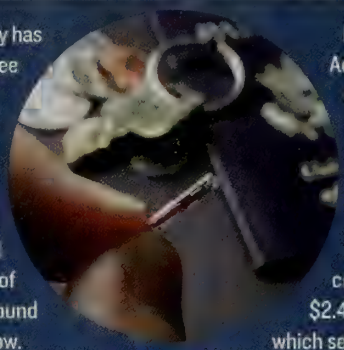
# Chip Shot

**Here's that perfect Christmas gift for** the pierced-body crowd: The VeriChip, a microchip the size of a grain of rice that you have implanted under your skin. The chip emits a radio wave that beams an identifying code to a scanner, much like those toll-paying car devices. Cost: $200 implant fee from the company or whatever a doctor charges for the 30-second procedure; either way, there's a $10 monthly service charge.

Applied Digital Solutions, a Palm Beach, Fla. penny-stock concern, is hawking the device as a foolproof, and supposedly harmless, way for corporate offices and sensitive places like nuclear power plants to keep out the wrong people. Or it could be used for credit card data. But so far no company or government agency has bought into this as an employee badge.



Instead, Applied Digital is trying to sell the chips to first-on-the-block individuals, mainly to create some buzz. Only a dozen intrepid volunteers, mainly employees of Applied Digital, are walking around with the chips in their arms now.

Queasy about this? You've got good reason, and Big Brother is the least of them. According to a shareholder suit filed in May in Florida, the company claimed that all the hospitals in the Palm Beach area would be using VeriChip scanners, only to admit a day later that no hospital had a scanner. Applied says the suit has no merit.

In November the Food & Drug Administration sent a warning letter ordering Applied Digital to quit marketing its chips for health care uses until the agency decides how they will be regulated. The company's stock now trades around 50 cents a share, from a high of $2.40 in May. In 2001 the company, which sells several of what it calls "personal safeguard technologies," lost $205 million on revenue of $156 million.

Implanting the chip means you're betting the company will be around to supply the $800 scanners to read the signal. If you lose that bet, you'll need money for surgery to remove the chip.

—*Chana R. Schoenberger*

# Glass Houses

## David Johnson hurls invective at real estate partnership insiders. But how does he treat his own investors? BY RISHAWN BIDDLE

IN THE MURKY AND ILLIQUID WORLD OF REAL ESTATE PARTnerships, where the limited partners sometimes get very limited disclosure of what is going on, David Johnson has made a name for himself as a self-appointed champion of the little guy.

"When we come in, we demand accountability. We demand books and records. And we take on general partners who are not looking out for the investors," says Johnson, 46, who cut his teeth as an accountant for Arthur Andersen in the 1980s.

Johnson, who works in North Kansas City, Mo., boasts he's launched at least 100 tender offers and more than 50 lawsuits against syndicators in the hope of eventually achieving "fair market value" for himself and other investors. "He does everything he says he'll do. He looks out for anyone who invests money along with him," says W. Robert Kohorst, an investor from Pasadena, Calif. who's a trustee of Johnson's Maxus Realty Trust.

But the opinion is not shared universally. In a recent [illegible] of lawsuits and a proxy fight Johnson's [illegible] being compared to those of the syndicators he [illegible]. In a lawsuit that go[illegible] month National Par[illegible] ments Corp., a Be[illegible] estate syndicator once [illegible] Forbes 400 real estate [illegible] Alan Casden, accuses Johnso[illegible] of fraud and "gross financial improprieties" in his [illegible] management of 20 tax-credit partnerships.

Napico's charges were echoed in another lawsuit it won last March, when the firm was awarded $3.6 million in damages and the removal of Johnson as head of two other investment vehicles. Among other allegations Napico claims that Johnson diverted $101,961 to his personal use. Johnson denies the charges and is appealing the jury verdict. He contends that Napico filed the suits in retaliation for his efforts to oust it as manager of several partnerships. Johnson also reminds a listener that he and other Napico limited partners have their own outstanding lawsuits against both the company, now controlled by a Denver REIT, and Casden.

"We think we're good guys," huffs Johnson. "We like to make money with our limited partners, while Napico likes to make money off them."

"The verdict says it all," retorts Napico's and Casden's attorney, Thomas Nolan.

Branching out on another front, Johnson recently waged a proxy battle with Chad Therapeutics, a Chatsworth, Calif., maker of respiratory care devices, after acquiring 6.7% of the company's shares. He lost the fight in September after the company trotted out examples of Johnson's legal scrapes.

Meanwhile, an investor is agitating at a St. Louis real estate partnership, Maxus Real Property Investors Four—a distant cousin of Maxus Realty Trust—that Johnson took over two years ago. Real estate developer O. Bruce Mills has jousted in court with Johnson over distribution of funds, as well as over the future of the property. "Johnson's not my kind of guy," seethes Mills. "He goes after other firms for hurting his investors but he does the same thing." ■

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# Redemption Song

## In need of a hitman, BMG decides that Clive Davis, at any age, is the right choice.

BY BRETT PULLEY

Still spinning after all these years: Davis, with new and old stars Alicia Keys, Busta Rhymes, Rod Stewart, Luther Vandross.

FROM A SIXTH-FLOOR CORNER OFFICE OVERLOOKING tony Fifth Avenue shops and Central Park, a stereo is blasting gut-shaking bass beats from the latest release by the rapper known as Busta Rhymes. The office is a mix of style and acoustic perfection—with a large black desk shaped like a record album cut in half and walls padded with chocolate-colored suede. The man seated behind the desk is said to have the best ear in the music business.

Just three years ago, at 66, Clive Davis appeared headed for the music-mogul pasture. The suits at BMG, the music unit of German media giant Bertelsmann, had decided they needed younger blood. After a storied career that included orchestrating the success of Aretha Franklin, Billy Joel, Whitney Houston and Carlos Santana, Davis was replaced as the head of Arista Records, the BMG-owned label that he had launched 25 years earlier.

But now BMG has done what you don't see too often in the music world—admitted a mistake. In what amounts to an acknowledgment that it never should have pushed Davis aside, BMG just paid an estimated $100 million to buy the remaining 50% that it did not already own of Davis' two-year-old label, J Records (it paid $150 million in 2000 for the othe half). BMG also brought him back to take control of its fallen angel RCA label (Elvis Presley, the Dave Matthews Band). Th combined entity, RCA Music Group, will have 3.4% of the tot North American album market, up one-third from RCA's cur rent share. BMG also includes Arista (performing well unde Davis' replacement, Antonio Reid), and it just completed th $2.7 billion purchase of Zomba (home to Britney Spears). It i the second-largest music company, with 17% of the Nort American market. The biggest, Vivendi's Universal Musi Group, has a 31% chunk.

What caused BMG to decide that Davis is not so old after all Mainly that it needed his sure touch in a lousy environment— unit sales are down 13% in the U.S., according to Nielsei SoundScan. He guided upstart J Records (named for his mid dle initial) to a fast start, striking gold with neosoul newcome Alicia Keys, whose debut album, *Songs in A Minor*, has sold 9.: million copies. He has used J Records to revive the careers o fading stars like R&B balladeer Luther Vandross and pop rocke Rod Stewart, whose recent release of classic American song has sold over 1 million copies in the U.S. With a roster of abou 40 artists, the J Records company is generating some $200 mil lion a year in revenues.

"The recovery [after being forced out of Arista] was sc strong and so immediate," Davis says, referring to his come back. "I consider myself fortunate that the hits did not stop coming."

In addition to what Davis would only describe as the "handsome" sum of money that he received from BMG, he signed a deal to remain on the job at RCA for five years. That keeps Davis in place as one of music's primary arbiters of popular taste until age 74. F

### Curriculum Vitae of an Ear

**Clive Jay Davis**

Born Apr. 4, 1933, Brooklyn, N.Y.
Graduate of New York University and Harvard Law School

**1967** Named president of Columbia Records, after first serving as general counsel. Signed Janis Joplin, Santana and Aerosmith. Helped develop Barbra Streisand, the Isley Brothers and Miles Davis.

**1973** Fired from Columbia amid allegations of improper expense accounting.

**1974** Founded Arista Records. Introduced Whitney Houston, Kenny G and Barry Manilow.

**2000** Recipient of the Trustee's Grammy for lifetime achievement.

**2002** Gave $5 million to establish Clive Davis Department of Recorded Music at NYU.

# BUSINESS TRIVIA QUESTION

*Number 19*

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or
❑ True?

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# The Informer

informer@forbes.com

Drawing more than landscapes: Thomas Kinkade.

## Painter of Chutzpah

Thomas (Painter of Light) Kinkade, the commercially successful landscape and slice-of-Americana artist, just had his application for tax-exempt status for a nonprofit he established nixed by the Internal Revenue Service. The IRS ruled that a major purpose of the Thomas Kinkade Foundation Charitable Trust, ostensibly set up to aid other charities, was to buy copies of Kinkade's art from his publicly traded company, Media Arts Group, thus constituting illegal personal gain to the California-based Kinkade, 44. His trust just sued the IRS, saying it buys the prints from Media Arts Group "for cost." —*Janet Novack and William P. Barrett*

## But Didn't Dr. No Die in the Movie?

Cleveland's Case Western Reserve University and its Weatherhead School of Management, under fire for, among other things, $37 million in cost overruns for the new Frank Gehry-designed building, just got hit by yet another spitball—from the University of Pennsylvania's lofty Wharton School. "Unlike Case Western's controversial architectural marvel, Wharton's new $140 million facility is a form-follows-function building," a Wharton flack crowed in an e-mail media pitch. "Each of the building's 48 classrooms is equipped with a space-age lectern ... that one prof said makes him feel like Dr. No." A miffed Case Western just sent the Wharton flack an invitation to come and take a tour. —*Stephane Fitch*

## More Bin Laden Fallout

Always on the lookout for a new—and legal—point-of-sale marketing tool, some life insurance agents are drooling over the federal government's published formulas for compensation to Sept. 11 next-of-kin. The payouts average about 25 times annual income—much greater than the three-to-ten-times multiple the insurance industry traditionally has used in sales pitches to prospective customers. Gushes one industry newsletter, "Now, when asked, 'How much insurance do I need,' you can respond with 'Let's see what your family would have received if you had died in the Sept. 11 attacks.'" —*J.N.*

## New Openness in Charitable Fundraising

Upwards of a half-dozen charities across the country are said to raise money by selling calendars with scandalous photos. "Nude calendars are now the rage," a New Jersey fundraiser said at a recent conference in Philadelphia of the Alliance for Children & Families. To make his point vividly, the speaker displayed the latest calendar of the McLaughlin Foundation, a historic preservation group in South Paris, Me. Naked board members are shown on the cover behind a wheelbarrow, shovel and stepladder. Calendar price: $18.95. —*Matthew Swibel*

## Just Wondering Who Taught Them This Stuff

News reports say editor-in-chief Nick Will of the Harvard Business School student newspaper, the *Harbus*, quit last month after a school official reprimanded him for a published cartoon blaming job interview scheduling problems on "incompetent morons." Such comments should be the least of the school's concerns, given the career paths of some of its graduates. —*W.P.B.*

| GRADUATE | POST-HARVARD BUSINESS SCHOOL HIGHLIGHT | CONSEQUENCE |
|---|---|---|
| Adrian Antoniu | misusing confidential information as Morgan Stanley banker | probation, 1982 |
| Ira B. Sokolow | at Shearson Lehman Brothers, leaking word of planned mergers | sentenced to 1 year, 1986 |
| Paul Bilzerian | committing securities and tax fraud while Singer Co. chairman | sentenced to 4 years, 1989 |
| Martin A. Siegel | insider trading and tax evasion in Ivan Boesky scandal | sentenced to 2 months, 1990 |
| [illegible]-Collins | forging documents to get bank loans in New Jersey | sentenced to 2 years, 1992 |
| [illegible] | orchestrating accounting scam as Boston company head | sentenced to 33 months, 1996 |
| [illegible] | president of Utah's fraud-ridden Bonneville Pacific Corp. | sentenced to 13 months, 1996 |
| [illegible] | conspiring to bilk investors of more than $17 million | awaiting sentencing, 2002 |
| Alan B. Bond | taking $6 million in kickbacks as New York money manager | in jail awaiting sentencing, 2002 |

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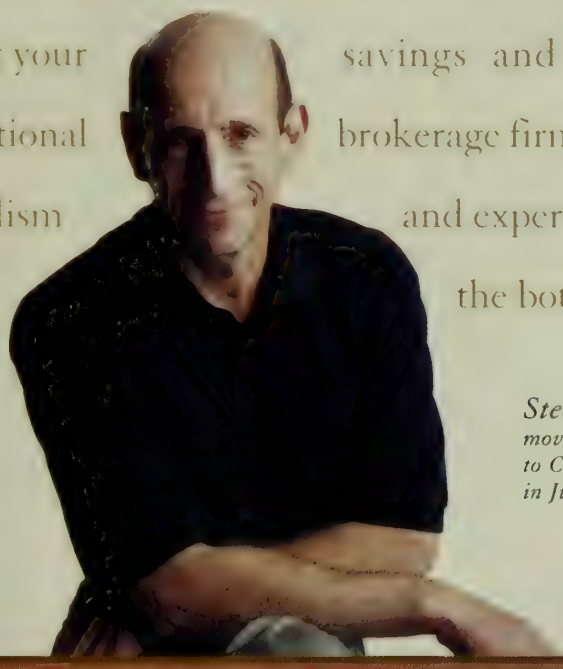

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Of course the last 50 years

have been a blur.

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The 50th Anniversary Corvette.

CHEVROLET 50 CORVETTE

Forbes
DECEMBER 23, 2002

Some of Sony's
west customers
re in Shanghai.

GAO FENG / IMAGINECHINA

# Beat 'em

## China is a huge competitive threat for Japanese manufacturers—and also an opportunity | By Robyn Meredith

REMEMBER THE 1980S, WHEN CORPORATE America thought it couldn't compete with Japan? It is déjà vu in Asia, only this time, Japan is the underdog, terrified and demoralized by the lightning-fast industrialization of China.

However, as Japanese politicians go another round in their never-ending brawl over whether to fix Japan's dysfunctional banking system, corporate leaders and economists are saying the unspeakable: China may be Japan Inc.'s savior instead of its downfall.

Take Sony. Already it has 10,000 employees in six factories in mainland China. In July Sony opened a design and engineering center in Shanghai and an engineering center in nearby Wuxi. It plans two more factories in China. "Many Japanese companies feel that the competitiveness of Chinese companies can sometimes be taken as a threat," says Sony President Kunitake Ando. "We believe we have great potential in China."

By 2008 Sony expects its annual sales in China to reach $8.5 billion. That's a lot by any reckoning, but here's why it really matters: Sony would then be selling more in China than in Japan.

As goes Sony, so goes the rest of Japan. Japanese foreign investment in China jumped 49% last year to $4.35 billion and has continued at a strong pace this year.

"All the Japanese companies have to consider how China fits into their plans," says Paul Calello, chairman of Credit Suisse First Boston, Asia Pacific. "China has a dual allure: It is a place to make things and a place to sell things."

Because China usually insists on local production in order to sell into its markets, it offers another reminder of the 1980s, when American import barriers led the Japanese to initiate what has become a fruitful foothold in auto and other production in the U.S.

Building products in China allows Japanese companies to lower costs by hiring cheap Chinese workers. And now that many urban Chinese can afford to buy more than bare necessities, sales of consumer goods are taking off in the new market next door.

Profits from anywhere—even a poor nation like China—are just what Sony and most other Japanese companies desperately need after a decade-long economic slump in Japan. Sony earned a pathetic $115 million on sales of $56 billion in the fiscal year ended last March. That's an average of $685 in profit generated by each of Sony's 168,000 employees.

Sony's China operations are a microcosm of its new strategy, which Ando calls a "business model for the broadband age." Sony now strives to link together its games, laptops, movies and mobile phones into an entertainment smorgasbord, accessible at home or on the go. Thus, in one of its Shanghai factories, Sony makes camcorders. In the other, it makes Wega-brand televisions. In nearby Suzhou it makes circuit boards, and an hour's drive farther down the highway, Sony assembles its Vaio multimedia notebook computers. In the southern Chinese city of Huizhou, Sony makes parts for DVDs, Handycams and PlayStations. It makes cell phones in Beijing.

Sony produced the Academy Award-winning movie *Crouching Tiger, Hidden Dragon* in China, where production costs are low, and it has finished another, the upcoming *Warriors of Heaven and Earth*. Sony plans

**Made in China: Sony Handycam; Sony color TV; Vaio notebook computer.**

to make several movies a year in China, spending $100 million there in the next three years.

Sony is not the only big Japanese company looking to China—and looking over its shoulder, to history—to find a way out of a decade of economic doldrums. The emerging competition from China could force Japanese companies to take action. After all, when U.S. companies feared they couldn't compete with Japan, they restructured to cut costs, and those changes led to America's booming 1990s.

"We have to do the same," says Uichiro Niwa, chief executive of Itochu Corp., the giant Japanese trading house. "We don't need to be afraid." Itochu has been doing business in China for 30 years, and losing money there for much of that time. Finally, 80% of its 209 companies in China are profitable.

"I'm not thinking China is the enemy to Japanese companies anymore," says Niwa. "It is quite a good thing for us that China might be developing its economy very rapidly in the future."

This relationship is freighted with h torical sensitivity. Japan brutally occupied China in the 1930s and 1940s. But after the war the two economies have seesawed. In the mid-1950s China's economy was twice as big as Japan's, according to Morgan Stanley's chief economist, Andy Xie. Thanks in part to the depredations of China's Cultural Revolution, by 1994 Japan's economy had grown to nearly nine times the size of China's with only a tenth of the population. Now that China's economy is growing fast, "the tables have begun to turn," says Xie.

Of course, imports from China—or anywhere—have a hard time reaching Japan's protected markets. Japan imports only 8% of its GDP—the same as in 1990, according to Goldman Sachs—suggesting that China's increasing exports to Japan are simply replacing goods Japan used to buy from other countries.

Nonetheless, Japanese farmers howled when cheap leeks and shiitake mushrooms began arriving from China, and a trade skirmish broke out. Traditional shopkeepers are looking on in horror as Japanese consumers flock to Tokyo's new "100 yen" stores, where mostly Chinese goods sell for less than $1.

At a recent Nikkei Forum in Tokyo, a Taiwanese semiconductor sage was asked which Japanese companies could survive the looming competition from China. The outsider did not assume Japan's defeat. "I really have a lot of faith in the Japanese companies," said Morris Chang of Taiwan Semiconductor Manufacturing Co. "In the last te years, they have fallen behind in capital in vestment and research and development in vestment. But the Japanese companies ha a way of coming back—they persevere."

Japan's prime minister, Junichir Koizumi, is embracing links between th two countries. "Some see the economic de velopment of China as a threat. I do not he says. "I see the advancement of Japan China economic relations not as a hollow ing out of Japanese industry but as an op portunity to nurture new industries i Japan and to develop their activities in th Chinese market."

Sony and Itochu aren't the only one that are embracing China. Ajinomoto Co a food products company, figures that Chi nese are willing to buy its curry rice an other fast foods in convenience stores onc per capita incomes reach $1,500 a yea China's average is just $850, but the num ber is twice that in thriving cities. Aj nomoto has started selling curry rice i Shanghai for $4 a bowl. Test-marketin showed Chinese thought the Japanes recipe too bland, so Aj nomoto spiced it up. Chi Executive Kunio Egashir sees a huge new mark opening next door. Japan with just 127 million peopl is now Ajinomoto's mai market for fast foods. Chi na's relatively prosperou coastal rim, with 600 millio residents, dwarfs the com pany's home market.

"China could be a sav ing grace for Japan Inc., says Fred Hu, managin director for Goldman Sach in Hong Kong.

Times have changec When Sony transferre Hiroshi Shoda to Beijing decade ago, half his col leagues offered him thei condolences over the caree move.

Not these days. "Ou business is growing ver fast," Shoda says. "Nov everybody is saying, 'Yo made a good choice.'" ■

**Sony movies: Academy Award-winner *Crouching Tiger, Hidden Dragon*; and the upcoming *Warriors of Heaven and Earth*.**

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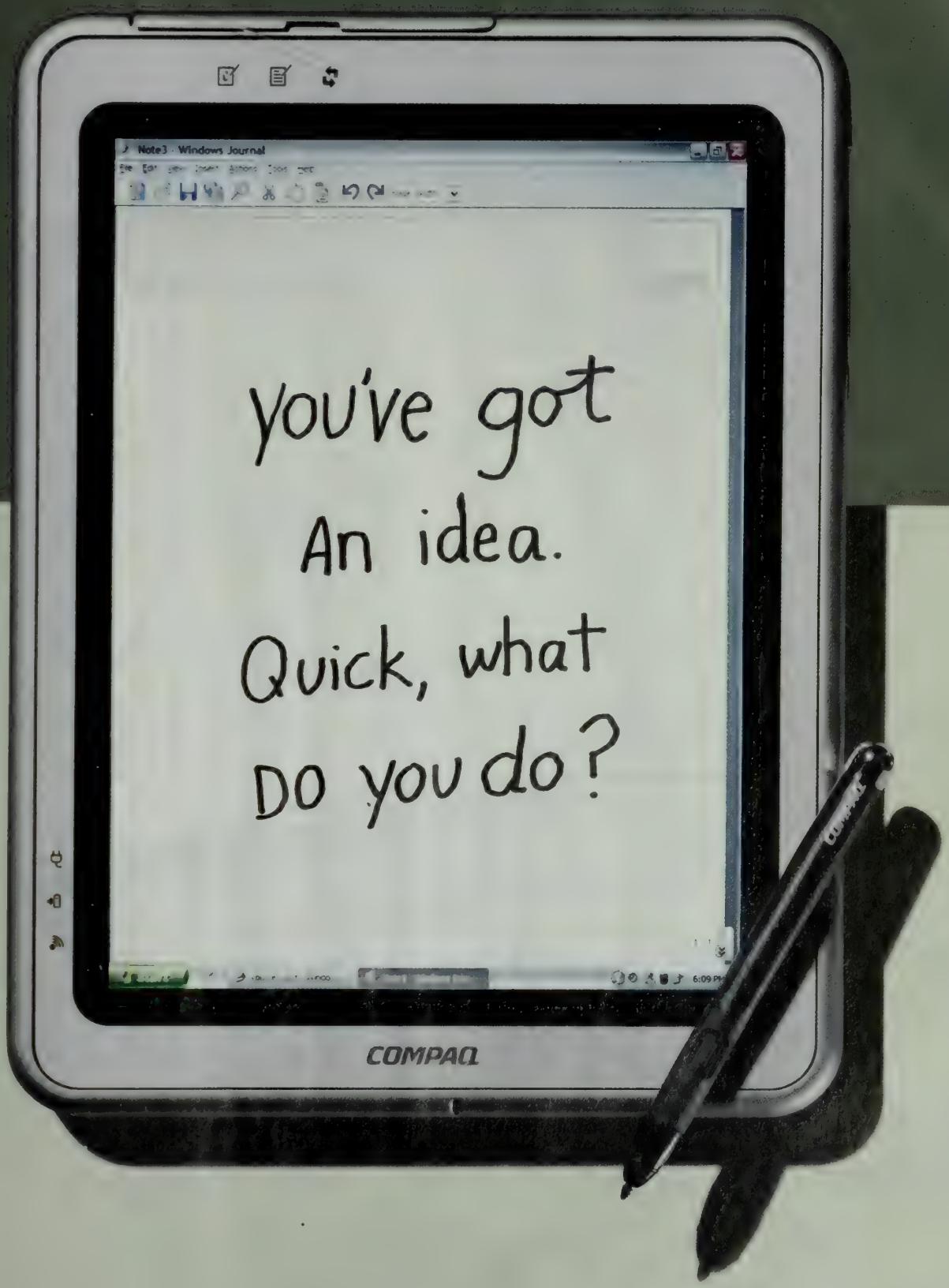

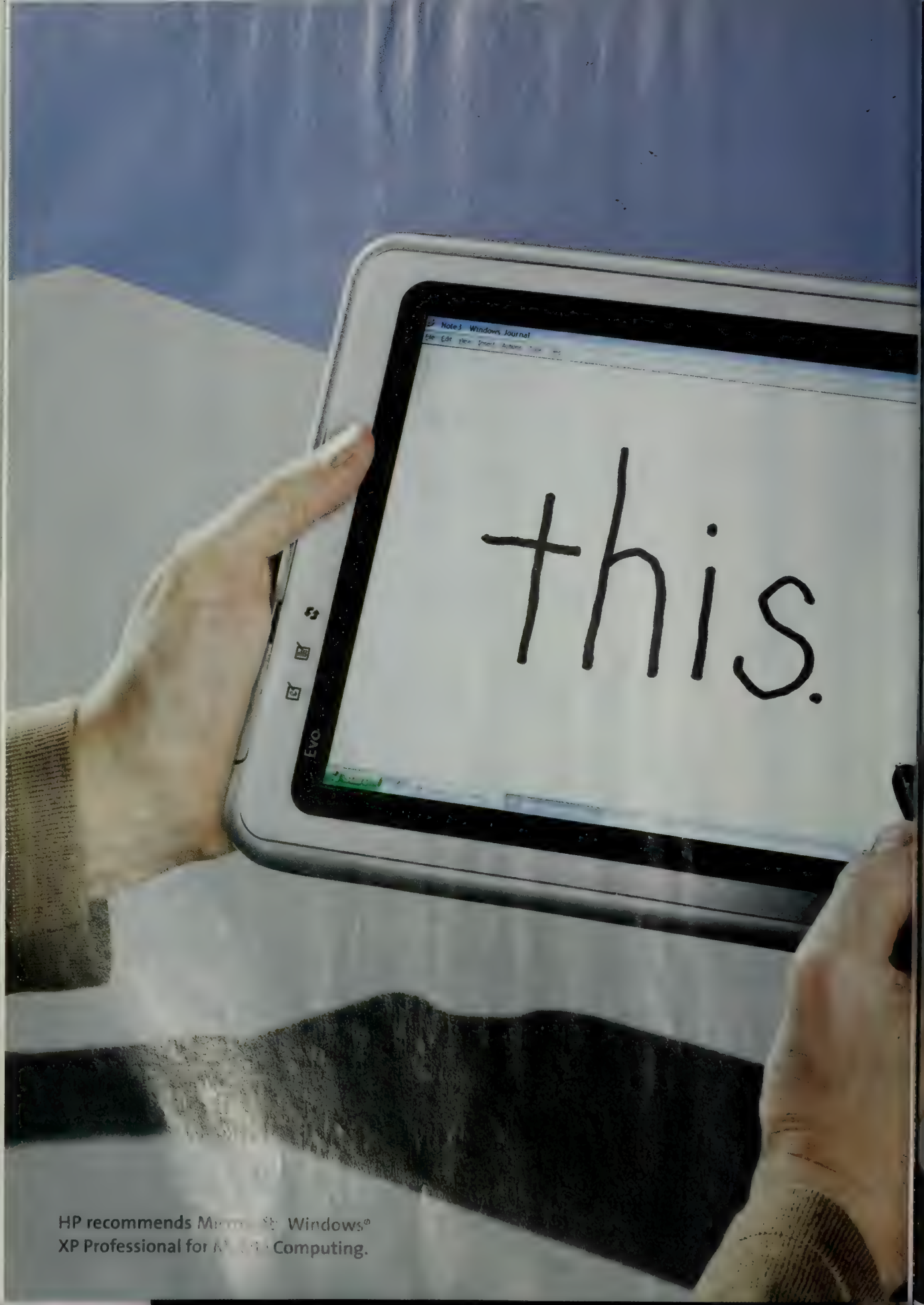


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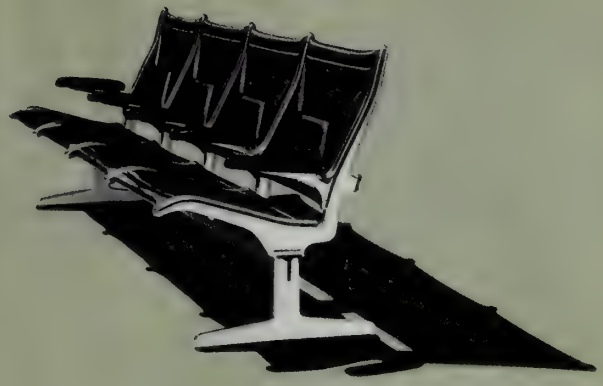

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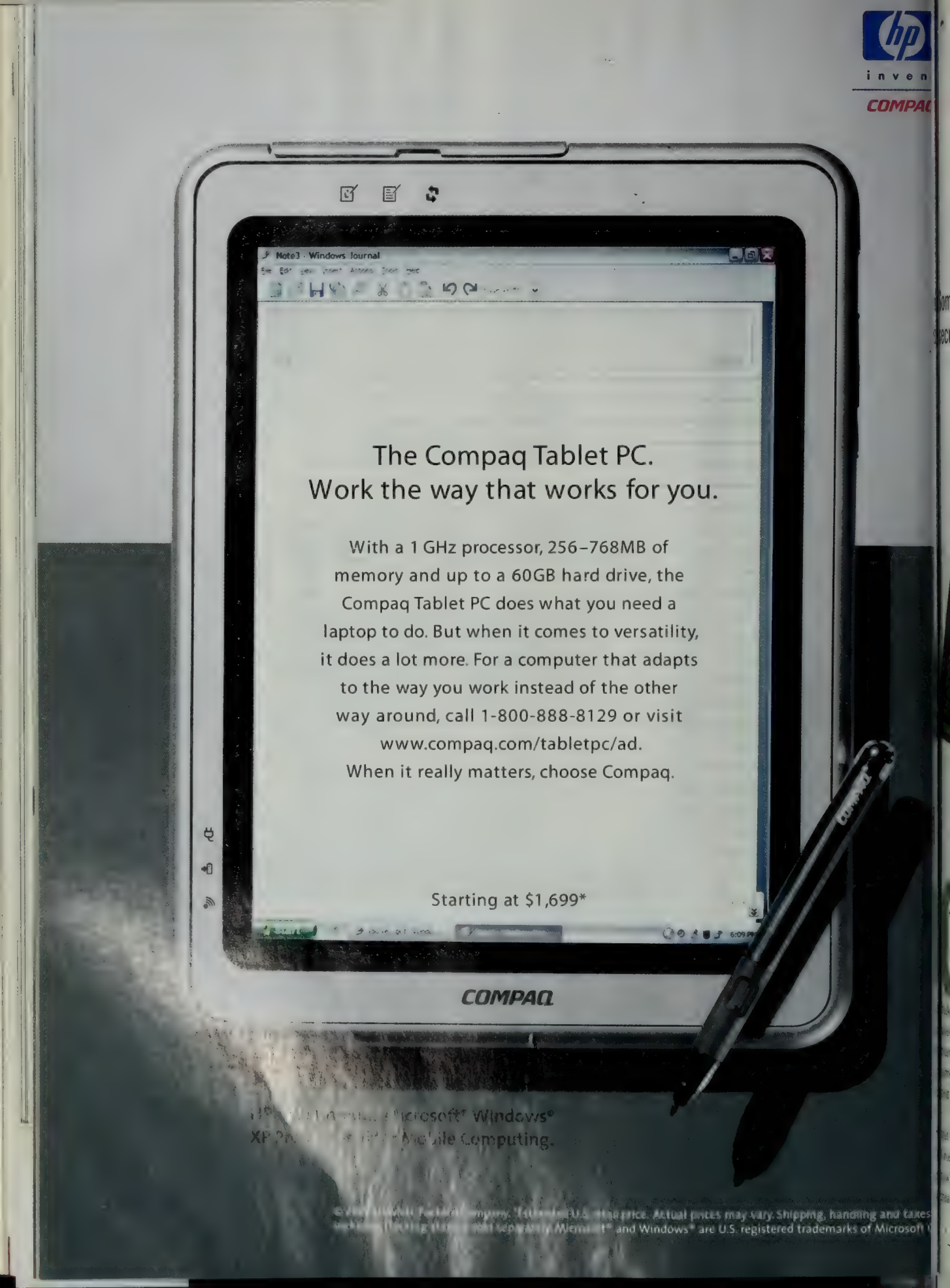
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# Rate Games

**ome banks have given a shot to their earnings by loading up on mortgage ecurities with juicy yields. It's a risky way to do business** BY BERNARD CONDON

GREATER BAY BANCORP JUST RAN OUT OF LUCK. IT had to admit that its tactic of buying pools of high-yield mortgage-backed securities is dangerous. If interest rates should rise, profits from these securities could quickly turn to losses. The frenzied buying has left the bank vulnerable: Its mortgage-ackeds have reached $2.9 billion and now compose 35% of its ssets, up from 10% two years ago. So the bank announced ecently that it will pull back from its purchases. That move, plus ome problem loans, led analysts to cut earnings estimates for ext year. The stock dropped 20% in two weeks.

"You can get so enticed by the impact on earnings per share hat you're not willing to give them up," explains Greater Bay hief Financial Officer Steven Smith. But all that's available ow, he says, are pools of loans at 5% to 5.5% rates—yields too heager to compensate for the interest rate risk.

At least you can credit this bank for taking a step back and owning up to the risks. And risks there are in interest rate games. Hedge fund Beacon Hill Asset Management lost 54% of its $733 million in assets in two funds with a risky bet in which it bought wads of mortgage paper while shorting Treasurys.

Banks like Greater Bay played the game for a while, loading up on mortgage paper with fat yields in order to fill in the vacuum of diminished commercial lending. They figured that soon enough an economic recovery would restore earnings from their usual lending activity, so they wouldn't become dependent on the profits from mortgage-backeds. The recovery has not yet arrived. Now those banks face a tough decision: Stop playing with mortgages and lose the profits, or continue and court Beacon Hill's fate on a piece of their asset base.

The mortgage-backed securities bought by banks most often have been issued by Fannie Mae or Freddie Mac. Like Treasurys,

# Mortgage securities at banks have risen 55% in two years. If rates rise again, prices could fall sharply as investors step over each other to sell.

these have virtually no credit risk. Unlike Treasurys, the mortgage securities incorporate a lopsided bet on interest rates: If rates climb, they get hammered; but if rates fall, they don't rise in value by a corresponding amount. That's because the mortgages on which they are based can be paid off by the borrower at any time.

The lopsided interest rate bet is mathematically equivalent to a transaction in which the buyer of the mortgage paper gives away an option to the homeowner. The buyer of a mortgage security from Fannie Mae gets compensated for the built-in option by pocketing a rich yield—about 1.5 percentage points more than the yield on ten-year Treasurys. In economic terms it's a fair trade: I give you an option, you give me higher interest payments. But the accounting is peculiar. The holder of the mortgage paper counts the whole yield as "income," without allowing for the value of the option he is giving away. In a theoretical sense, it's analogous to the accounting for employee options, which on most corporate profit-and-loss statements are treated as having no value.

Under accepted accounting rules, banks holding mortgage-backeds [illegible] reported income. If rates fall, however, they pay the pipe[illegible] out on the capital gain that would have accrued [illegible] of a noncallable bond. They get their principal [illegible] early while rates are falling, precisely the wrong [illegible] cash. That's just what's happening now. With [illegible] rates at 40-year lows, homeowners are paying off [illegible] mortgages early by moving or refinancing.

Now what do the banks d[illegible] earnings? They have had to buy more and mor[illegible] securities to get the same lift. Hence the decline in net interest margins—Greater Bay's fell 17 basis points last quarter—and the bal[illegible] looning stake in the securities. Holdings of mortgage-backeds a[illegible] commercial banks have risen 55%, or a net $246 billion, in the tw[illegible] years through September, according to the FDIC's latest report.

For the moment, the risky mortgage game isn't hurting ban[illegible] profits. Indeed, when rates start to fall, mortgage securities typi[illegible] cally go up a bit in value (even if not as much as noncallable Trea[illegible] surys would go up). A bank can put a jolt of caffeine in its earn[illegible] ings by selling a few of these older securities at a capital gain[illegible] Mellon Financial did just that in its September quarter. A U.S[illegible] Bancorp Piper Jaffray report says that unrealized gains, thoug[illegible] unlikely to be taken by most banks, could be used to boost thi[illegible] year's earnings at the ten biggest banks an average 28%.

The danger, of course, is that rates will turn around and g[illegible] the other way. Then the modest profits on holding mortgag[illegible] securities could turn into big losses. Thu[illegible] Fannie drew much criticism last quarte[illegible] for taking advantage of a regulator[illegible] change to write up $135 billion of it[illegible] mortgage securities. The move boostec[illegible] shareholder equity 36% but the gain coul[illegible] vanish if rates rise.

Banks and hedge funds aren't the onl[illegible] gamblers in these dicey securities. Pensio[illegible] funds have jumped in, too. Mortgage secu[illegible] rities in the Lehman Brothers aggregat[illegible] index, against which many funds judg[illegible] their returns, have risen to 35% from 30% in five years. The value of mortgage securi[illegible] ties has doubled to $4.5 trillion since 1994. The fear is that if rates start rising again prices could fall sharply as investors ste[illegible] over each other to sell. Says Bayard Clark, chief financial office[illegible] of $13 billion (assets) Commerce Bancshares of St. Louis, "It[illegible] somewhat a game of chicken now."

David Hendler, an analyst at research boutique CreditSights says the investing public seems blissfully unaware of what is goin[illegible] on. Bank shares, he says, are trading as if these mortgage securi[illegible] ties weren't a big source of earnings *(see table)*. A case in point i[illegible] Mellon, whose holdings of mortgage securities have climbed 81% in the past two years to $8.7 billion, or 26% of the bank's assets. Under the circumstances, Hendler says, the bank's shares are to[illegible] richly priced at 19 times 2003 estimated profits.

Bankers are still making the mistake of thinking of mortgage-backeds as "high-yield Treasury securities because the[illegible] have no credit risk," says James Bianco of Bianco Research i[illegible] Chicago. "But over the past 20 years interest rate risk has burie[illegible] more people than credit risk."

## Mortgage Insecurities

Banks have been loading up on mortgage securities as a stopgap source of earnings while waiting for the economy to recover. Investors don't seem to mind, judging by the high P/Es at which some bank stocks trade. But the economy has yet to turn and these dicey securities are taking up a bigger and bigger portion of bank assets.

| | | MORTGAGE-BACKED SECURITIES | | | |
|---|---|---|---|---|---|
| Bank | Recent price | holdings[2] ($bil) | growth[3] | as % of assets | P/E 2003E |
| Commerce Bancorp[1] | $45.12 | $5.6 | 274% | 41% | 22 |
| Fifth Third Bancorp | 57.13 | 18.7 | 38 | 25 | 21 |
| Greater Bay Bancorp | 18.23 | 2.9 | 259 | 35 | 8 |
| Mellon Financial | 30.17 | 8.7 | 65 | 26 | 19 |
| U.S. Bancorp | 22.00 | 26.8 | 138 | 16 | 12 |

Prices as of Nov. 22. [1]Not related to Commerce Bancshares of St. Louis. [2]As of June 30. [3]First-quarter 2001 through second-quarter 2002.
*Sources: Multex via FactSet Research Systems; CreditSights; Portales Partners; Federal Reserve.*

WASN'T LONG AGO THAT

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N THE SUPPLY CHAIN

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EANT MIXING TWO KINDS OF

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# Wily Coyotes

## How a small-time developer leveraged a poor hockey team into a rich real estate deal.

BY KURT BADENHAUSEN AND MICHAEL K. OZANIAN

Phoenix Coyotes: The team throws big body checks on the ice and looks to cash even bigger checks at the bank.

IT'S REAL TOUGH TO MAKE MONEY OWNING A SMALL-market hockey team. Not only do the big-market teams earn more from tickets, corporate sponsors and cable TV fees than their small-market rivals, but hockey also has by far the smallest amount of welfare among the major sports: The National Hockey League's 30 teams share only 12% of their revenues. By contrast, National Football League teams split up 74%, National Basketball Association clubs, 34%, and Major League Baseball teams, 25%.

So teams like the Buffalo Sabres, Calgary Flames, Edmonto Oilers, St. Louis Blues and Tampa Bay Lightning regularly los money. Even the Detroit Red Wings, which consistently conten for the Stanley Cup, are moneylosers, in part because they hav the league's highest payroll.

But strip-mall developer Steven Ellman has figured out way to leverage his majority ownership of the Phoenix Coyote

| Rank | Team/Principal owner(s) | Current value[1] ($mil) | 1-year change in value | Annualized change in value[2] | Debt/ value[3] | Revenues ($mil) | Operating income[4] ($mil) |
|---|---|---|---|---|---|---|---|
| 1 | **DETROIT RED WINGS**/Michael Ilitch ('82) | $266 | 18% | 19% | 17% | $114 | -$3.4 |
| 2 | **NEW YORK RANGERS**/Cablevision Systems ('97) | 263 | -5 | 6 | 95 | 103 | -2.3 |
| 3 | **PHILADELPHIA FLYERS**/Comcast ('96) | 262 | 5 | 10 | 25 | 97 | 4.7 |
| 4 | **DALLAS STARS**/Thomas Hicks ('95) | 254 | 23 | 17 | 54 | 96 | 6.3 |
| 5 | **COLORADO AVALANCHE**/Stanley Kroenke ('00) | 250 | 3 | NA | 23 | 93 | 5.2 |
| 6 | **BOSTON BRUINS**/Jeremy Jacobs ('75) | 243 | 6 | 13 | 49 | 87 | 6.7 |
| 7 | **TORONTO MAPLE LEAFS**/Steve Stavro ('94) | 241 | 12 | 13 | 26 | 112 | 24.2 |
| 8 | **CHICAGO BLACKHAWKS**/William Wirtz ('54) | 218 | 9 | 12 | 0 | 78 | 6.7 |
| 9 | **LOS ANGELES KINGS**/Philip Anschutz, Edward Roski Jr ('95) | 205 | 8 | 9 | 64 | 81 | 7.1 |
| 10 | **MONTREAL CANADIENS**/George Gillett Jr ('01) | 187 | 3 | NA | 32 | 75 | 6.4 |
| 11 | **NEW JERSEY DEVILS**/George Steinbrenner ('00) | 159 | -9 | NA | 42 | 61 | -3.6 |
| 12 | **SAN JOSE SHARKS**/Kevin Compton, Gregory Reyes ('02) | 158 | 6 | NA | 29 | 71 | -0.8 |
| 13 | **NEW YORK ISLANDERS**/Charles Wang, Sanjay Kumar ('00) | 156 | 0 | NA | 64 | 51 | -4.5 |
| 14 | **COLUMBUS BLUE JACKETS**/John McConnell ('97) | 150 | 3 | 13 | 27 | 64 | 6.0 |
| 15 | **ST LOUIS BLUES**/William Laurie, Nancy Laurie ('99) | 148 | -3 | 14 | 65 | 70 | -18.0 |
| 16 | **WASHINGTON CAPITALS**/Theodore Leonsis ('99) | 140 | 1 | 18 | 61 | 61 | -25.4 |
| 17 | **MINNESOTA WILD**/Robert Naegele Jr ('97) | 139 | 3 | 12 | 113 | 61 | 12.1 |
| 18 | **PITTSBURGH PENGUINS**/Mario Lemieux ('99) | 137 | -8 | 11 | 29 | 59 | 3.0 |
| 19 | **ATLANTA THRASHERS**/AOL Time Warner ('97) | 134 | 0 | 11 | 39 | 58 | 2.9 |
| 20 | **NASHVILLE PREDATORS**/Craig Leipold ('97) | 132 | 0 | 11 | 30 | 53 | 9.0 |
| 21 | **CAROLINA HURRICANES**/Peter Karmanos Jr ('94) | 128 | 23 | 13 | 47 | 67 | -4.6 |
| 22 | **FLORIDA PANTHERS**/Alan Cohen ('01) | 127 | 10 | NA | 40 | 67 | -6.5 |
| 23 | **TAMPA BAY LIGHTNING**/William Davidson ('99) | 124 | 3 | 3 | 40 | 59 | -1.3 |
| 24 | **PHOENIX COYOTES**[5]/Steve Ellman ('01) | 117 | 48 | NA | 51 | 42 | -9.6 |
| 25 | **MIGHTY DUCKS OF ANAHEIM**/Walt Disney Co ('92) | 111 | -6 | 8 | 0 | 48 | -13.7 |
| 26 | **VANCOUVER CANUCKS**/John McCaw Jr ('95) | 110 | 4 | 10 | 86 | 56 | -0.8 |
| 27 | **OTTAWA SENATORS**/Rod Bryden ('91) | 95 | -1 | 6 | 98 | 57 | 2.0 |
| 28 | **CALGARY FLAMES**/Calgary Flames Limited Partnership ('80) | 94 | 3 | 8 | 28 | 47 | -3.7 |
| 29 | **BUFFALO SABRES**[6]/Rigas family ('98) | 92 | -21 | 5 | 170 | 46 | -11.5 |
| 30 | **EDMONTON OILERS**/Edmonton Investors Group ('98) | 86 | 7 | 5 | 37 | 43 | -0.8 |
| | **LEAGUE AVERAGE** | 164 | 5 | 11 | 46 | 69 | -0.3 |

Revenues and operating income are for 2001-02 season. NA: Not applicable. [1]Value of team based on current arena deal (unless new arena is pending) without deduction for debt (other than arena debt). [2]Current team value compared with latest transaction price. [3]Includes arena debt. [4]Earnings before interest, taxes and depreciation. [5]Value adjusted for pending new arena. [6]Sale to Mark Hamister and Todd Berman pending.

nto a rich real estate deal never before attempted in sports.

Yes, the Coyotes have been deep in the red since moving to 'hoenix from Winnipeg, Man. in 1996. That's because the team as a terrible lease at America West Arena: Almost all of the revnue from concessions, sponsorships and nonhockey events at he building go to the Phoenix Suns basketball team and the uilding's operator, Phoenix Development Ltd., both of which re controlled by Jerry Colangelo. Obstructed views at the arena, designed for basketball, mean that more than 4,000 of the 16,000 hockey seats have to be sold at a discount at every game.

But next December the Coyotes will move into a new, $180 million, taxpayer-financed arena in Glendale, Ariz., 15 miles west of Phoenix right off Highway 101. The city will own the arena, but the team will get all of the revenue from the facility for the next 30 years. The team's rent will be among the lowest in the league: $500,000 a year the first 20 years and $1 million a year thereafter.

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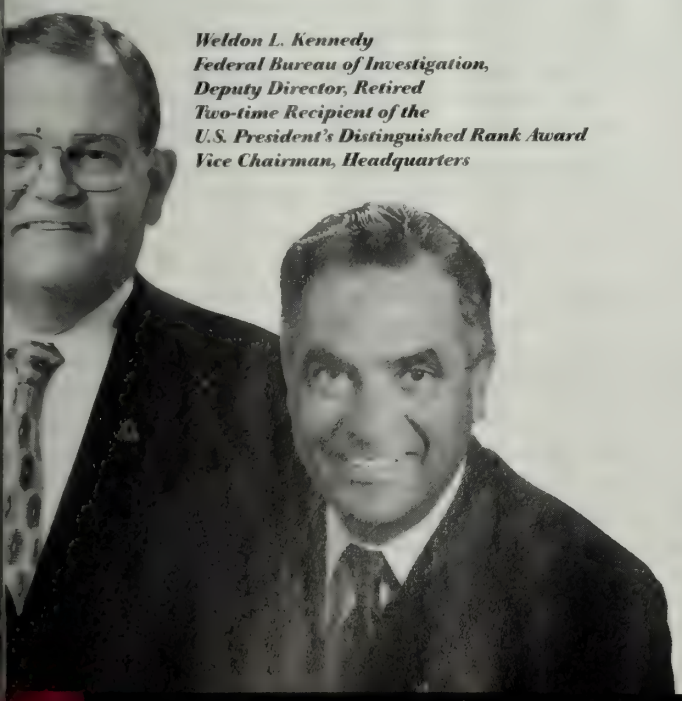

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FORBES calculates the new arena has increased the value of the Coyotes by 48% to $117 million from our $79 million estimate last year—the lowest in the four major pro sports leagues. The current value still puts the team near the bottom of the league. But the real value of the hockey team will be drawing people to Westgate, the 223-acre site Ellman is developing adjacent to the arena.

The blueprint for Westgate includes 1,100 hotel rooms, 2 million square feet of commercial office space, plus 500,000 square feet of health clubs, movie theaters and other entertainment facilities. It will take ten years to complete and cost an estimated $850 million. Also in the works: a plan to move football's Arizona Cardinals, which plays in Tempe, to the site as well.

**Wayne Gretzky (second from right): Scoring off the ice like he once did on it.**

Much like casinos that make big money from boxing fans who gamble on-site before and after title bouts, Ellman hopes hockey fans will stick around and pump dollars into the Westgate complex. Says Salvatore Galatioto, a managing director of sports banking at Lehman Brothers, "Everybody understands that if you have a sports venue, you're going to draw a lot of people. So everyone is trying to figure out how you trap them."

Ellman's cost basis for the project is extremely low. He bought the land for $17.6 million, or $75,000 an acre, from the Holcombs, a longtime Glendale farming family. After the purchase, Ellman had the parcel rezoned for commercial use. Its value is expected to double in four years.

Of the $850 million in development costs, Ellman and his partners in the project, who include hockey legend Wayne Gretzky (who owns 14% of the Coyotes) and Jerry C. Moyes, chief executive of Swift Transportation, are on the hook for only $100 million. The rest will be financed by public bonds that will be serviced by sales taxes generated by Westgate and the new arena.

Maricopa County, where Glendale is based, has the highest per capita income in the state, 13% higher than Arizona's average. Says the 50-year-old Ellman, a graduate of Arizona State University who has lived in Phoenix the past 30 years, "W[illegible] [should] make $10 million a year in the new venue—and I'm hoping that the real estate investment returns 30%."

Not bad, considering Ellman, who concedes he isn't a big sports fan, wasn't even looking to own the Coyotes or build Westgate a few years ago. Back in 1997 he bought a dilapidated mall in Scottsdale, a suburb on the eastern border of Phoenix with the idea of getting $350 million from the taxpayers to develop the property and then flipping it. To get the taxpayers to fund his venture, he persuaded Richard Burke, who owned the Coyotes at that time, to agree to move his team to Scottsdale if a new arena was part of the deal. Burke and the taxpayers wanted in, but in the end Ellman couldn't get the zoning he needed from the city council to build a new mall.

Ellman then hired former Arizona attorney general Grant Woods to shop his concept to other cities in the state. Meanwhile, Burke grew tired of pumping capital into the moneylosing Coyotes and starting negotiating with Ellman to sell him the team. Ellman eventually hooked up with Gretzky to buy the team from Burke in February 2001 for $127 million. Ellman paid a richer three times revenue, gambling he could pull off the Westgate project and a new arena for the Coyotes.

Moyes lent Ellman the bulk of the money to buy the team. But it was Gretzky's celebrity status that persuaded Glendale politicians and taxpayers to go ahead with the project. Says James Colson, Glendale's director of economic development: "Without Gretzky this probably would not have happened. Wayne made this an easy sale to the entire community."

Facing big operating losses and a payroll of $37 million (the league average for the 2000-01 season was $33 million), Gretzky, 41, hockey's alltime leading scorer, gutted the club after taking control of the team's day-to-day operations. He traded high-priced veterans Keith Tkachuk and Nikolai Khabibulin in favor of younger, hungrier and, yes, cheaper players.

Last season the team qualified for the playoffs with the tenth-best record in the league, despite an opening day payroll that was just 21st at $31 million. This year a raft of injuries has the Coyotes off to a slow start, but don't look for Gretzky to change his strategy.

"I don't have the capacity to sign free agents like some other teams have the luxury of doing," says Gretzky. "We have to spend more time turning over rocks and finding young talent and older guys that have stumbled but still have some upside."

Ellman's concept should have a positive impact on other hockey franchises. Says Lehman's Galatioto, "If it works it will make small- to mid-market sports franchises in suburban areas more attractive."

Perhaps. But there's only one Gretzky. F

*Additional reporting by Cecily Fluke and Lesley Kump.*

*No. 1*

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# Drug Money

**Daryl Katz has built a pharmacy empire from scratch in ten years. And he's just getting started** | BY NATHAN VARDI

THE DEAL THAT CATAPULTED DARYL A. Katz into the big time wasn't supposed to happen. He was sitting in a conference room in July 1997, a little-known 36-year-old nearing the end of a bidding war that had dragged on for months for a struggling Canadian pharmacy chain called Pharma Plus. The lawyer for the seller, food conglomerate Oshawa Group, entered the room to tell Katz once and for all that he had lost the auction. Katz (pronounced "cates") locked his gaze on him and asked for a favor: 30 minutes.

Katz stepped out of the room and phoned a friend who had joined a dominant shareholder of publicly traded Oshawa Group in some philanthropic work. Could he cajole the shareholder to intervene and give Katz one last chance to bid? Half an hour later the lawyer told Katz that circumstances had changed. Pharma Plus could be his if he anted up another $3.5 million. With financing from Toronto-Dominion Bank and McKesson Corp., Katz grabbed the 141-unit chain in a $70 million leveraged buyout and more than doubled the size of his company.

Such resourceful moves have helped turn Edmonton, Alta.-based Katz Group into the seventh-largest pharmacy chain in the Western Hemisphere—in just a decade. With 1,300 franchise and 500 corporate stores, Katz's empire operates under seve separate banners from Vancouver t Philadelphia and brought in $4 billion i systemwide sales last year. This year pri vately owned Katz Group will, accordin to people close to the company, net at leas $100 million on net revenue of $2 billior If Katz Group traded publicly, it would b worth $1.5 billion at lagging industry mul tiples—making Katz, who owns 100%, very rich guy at age 41.

"Daryl sits up there in Edmonto building an amazingly huge business whil staying off the radar screen," says Bren Belzberg, nephew of once-feared corporat raider Sam Belzberg. Brent, who runs

*No. 2*

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# OUR EARTH
# OUR TOMORROW

## Ricoh Shows That What's Good for the Environment Can Be Good for Business Too.

At Ricoh, a simple environmental philosophy pervades the company's business ethic: Since we all share the same planet, we're all obligated to protect and preserve it. Summed up as "Our Earth, Our Tomorrow," the concept is straightforward in its logic, but how can it be translated into its sustainable management?

The search for an answer over the last half decade has led the Ricoh Group — one of the world's leading suppliers of office automation equipment and supplies — on a revolutionary path. While it is the nature of business to earn a profit, Ricoh demonstrates that environmental conservation and profitmaking can go hand in hand.

### Energy-Saving Equipment

To cut electricity usage, Ricoh has developed a user-friendly method that enables photocopy machines to conserve energy. Copiers equipped with QSU (Quick Start Up) Technology are not only environmentally friendly, but compared with other models, they start up quickly — needing only 10 seconds to begin operating from the standby mode. In fiscal 2001, this overall decrease in electricity requirements by Ricoh Group products worldwide reduced carbon dioxide emissions by more than 16,000 tons. For its earlier efforts, the company won a 1999 International Energy Agency award for developing the first copier to achieve energy consumption of 10 watts or less while on standby.

### LEADERSHIP WITH A "GREEN" AGENDA

The Ricoh Group has long focused on helping businesses cooperate and share ideas so they can all run more efficiently. Since 1996, under the leadership of President and COO Masamitsu Sakurai, this approach has been applied toward the environment.

In the past, says Sakurai, the Ricoh Group "went through a passive stage with regard to environmental management; we dealt with regulations and responded to customers' needs." Next came a proactive stage, he says, "in which we reduced our environmental impact by voluntarily setting higher goals in environmental conservation as a global citizen."

Today the Group is preparing to enter what Sakurai calls the "responsible stage," in which it "strives to place environmental and economic aspects side by side and pays equal attention to environmental conservation and profitability."

### Zero-Waste to Landfill

If a product could be manufactured no waste whatsoever, there would b loss of resources, energy or labor. idea is not only sensible economically, environmentally as well. Such a proc was implemented at Japan's R Numazu plant, where "zero-waste to l fill" production was achieved beginnir February 1999. The plant was abl reduce costs incurred by production lo and waste elimination by $500,000 a At all the production sites, Ricoh is fo ing on efficiency and environmental servation through "The Five Rs": the p "rejects" anything that can bec waste; "returns" anything not used to pliers; "reuses" discarded produ "reduces" waste by sorting the good f the bad; and "recycles" what is ultim unusable. By adopting these measu Ricoh has achieved "zero-waste to lan in all production sites.

The Ricoh Group is promoting these other environmental management i not just for itself, but because it wan share what it has learned with other c panies around the globe. "When e employee at every company is involve this endeavor," says Masamitsu Sak president and COO, "then we will progress in the global environment."

For more information on Ricoh's co vation programs around the world, visi Web site at www.ricoh.com/ecology/.

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$120 million private equity firm in Toronto, has helped Katz gain entrée into the U.S.

Katz is a study in vivid contrasts. Gregarious and energetic, he shuns publicity and politics. He is a fast talker who drives his wife's Mercedes S600 at a slug's pace. His name is on his holding company, but not on his stores, which retain whatever name they have always had. Katz is a quiet family man (married, with twins) who still asks his dad for advice. But he bullies those who get in his way: He recently threatened Edmonton city officials that if they didn't change the zoning of 300 acres he wants to develop into residential housing, he would set up a pig farm. Said to be a committed philanthropist who doesn't reveal his causes, he is building a mansion next to the modest house of the father-in-law he admires.

He relies on a simple formula. Locate distressed assets at fire sale prices, then find allies to finance a buyout and turn around the troubled chain. Katz looks for three things in an acquisition: layers of management that can be cut, serial mismanagement and stores in a growing market.

The son of a pharmacist who himself owned a small group of stores, Katz got a law degree from University of Alberta. By 1991 he was practicing franchise law and dabbling in the frozen-yogurt business, when he read a trade publication that ranked Medicine Shoppe International a top franchisor of retail pharmacies. Katz called David Abrahamson, Medicine Shoppe's chief executive, to see if he could buy the Canadian franchise rights—only to find out that Abrahamson was about to sell those rights to a Montreal businessman.

Katz acted quickly, enlisting his father, Barry, and getting the Province of Alberta's venture capital unit to join him as an equity partner to lend credibility and heft. "I needed to go in there with sirens blaring because they were going to sign a deal with someone else," Katz explains. He negotiated a deal in which he would pay Medicine Shoppe $300,000 plus a share of profits to get the Canadian rights, and later bought out Alberta's stake.

As he was signing one-store proprietors to his Medicine Shoppe network, Katz realized there were profits to be had in the paper-shuffling end of reimbursement claims. So he cut a deal with Express Scripts, the St. Louis pharmacy-benefit manager, to help it enter the Canadian market, then got Scripts to buy him out of the contract. By 1996 Katz made enough money from his Medicine Shoppe and Express Scripts deals to buy the 36 Canadian stores of Rexall, a chain that got inventory from San Francisco drug wholesaler McKesson.

The McKesson connection proved crucial a year later when Pharma Plus was put on the auction block. McKesson had just built up its distribution machine in Ontario, and Pharma Plus was its biggest customer there. Since the Katz Group was the only bidder that did not have its own distribution network, Katz reasoned McKesson might back him. It came through with credit support for the deal, letting him borrow from Toronto-Dominion on Pharma Plus' inventory and receivables, and partly on McKesson's balance sheet, too.

**By the Numbers**
**Coming to America**

Katz thinks his firm's future lies south of the 49th parallel.

**$1.3 billion** Systemwide sales in the U.S.

**265** The total number of pharmacies in America.

**33%** The share of sales that come from the U.S.

*Source: Katz Group.*

The day after the deal closed Katz had about $60 million in debt, 146 unprofitable Pharma Plus stores—and nobody to run them. He hired Norman Puhl, who had run a rival chain, Big V. At Pharma Plus he cut costs and halved corporate staff. Puhl took, say, a 5,000-square-foot store in the suburbs of Toronto and moved it across the street to a 10,000-square-foot store. His efforts, says Katz, have doubled the chain's annual sales per store to $3.5 million in the last five years, and made it profitable.

Katz continued to tap U.S. funding when he bid on Canada's largest pharmacy chain, Shoppers Drug Mart. Brent Belzberg introduced him to James Lee, then vice chairman at Chase Manhattan. "Anyone ever lose money on you, kid?" Lee asked Katz before arranging a syndicate to lend him $1.6 billion. But Katz, who would have had to cede equity in the deal, had second thoughts. (Kohlberg Kravis Roberts & Co. won the bid.) "I had the money and everybody was pushing me to do it," Katz recalls. "But it was above my price."

A better opportunity came along in 1999. Snyders Drug Stores, a moneylosing chain of 54 units in places like Minnesota, Michigan and Wisconsin, met Katz's criterion of paying no more than 25% of sales. He got it for $50 million and hired Gordon D. Barker, the retired chief of Thrifty Payless Drug Stores, to run it. Barker rebuilt Snyders by refurbishing stores, adding drive-through windows and keeping pharmacies open 24 hours, expanding same-store sales 10% in each of the last two years. He also cut costs by exploiting Katz Group's increasing buying power.

Today the company controls 265 pharmacies in the lower 48, thanks to last year's buyout of Drug Emporium. The big box pharmacy discounter was buffeted by a $40 million flirtation with Internet retailing and competition from Wal-Mart. When Barker phoned about acquiring the chain he could hear Katz typing on his PC in his Edmonton office, checking the price of Drug Emporium's bonds, then trading around 40 cents on the dollar. "We should buy the whole thing," Katz yelled. They ended up with 77 of the best stores, about 60% of the lot, and enough for the bankruptcy trustee to pay bondholders 22 cents on the dollar in the $21 million buyout (which did not include an undisclosed amount of trade debt). Once again McKesson came through, this time with $40 million in credit support.

No recent acquisitions. Katz lost out on a bid in July for the bankrupt Phar-Mor to a group headed by Giant Eagle and CVS. He's been busy rationalizing earlier purchases, wringing better prices from suppliers like Johnson & Johnson (whose products he threatened to pull) and signing new franchise deals with 960 of the 1,200 members of Drug Trading, a Canadian co-op he bought for $14 million. "If I do nothing but keep buying independents, I can double my sales in five years," he says. His overworked executives hope that's all he does. But they know he is unlikely to sit still for long. F

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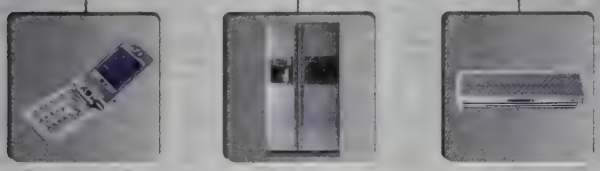

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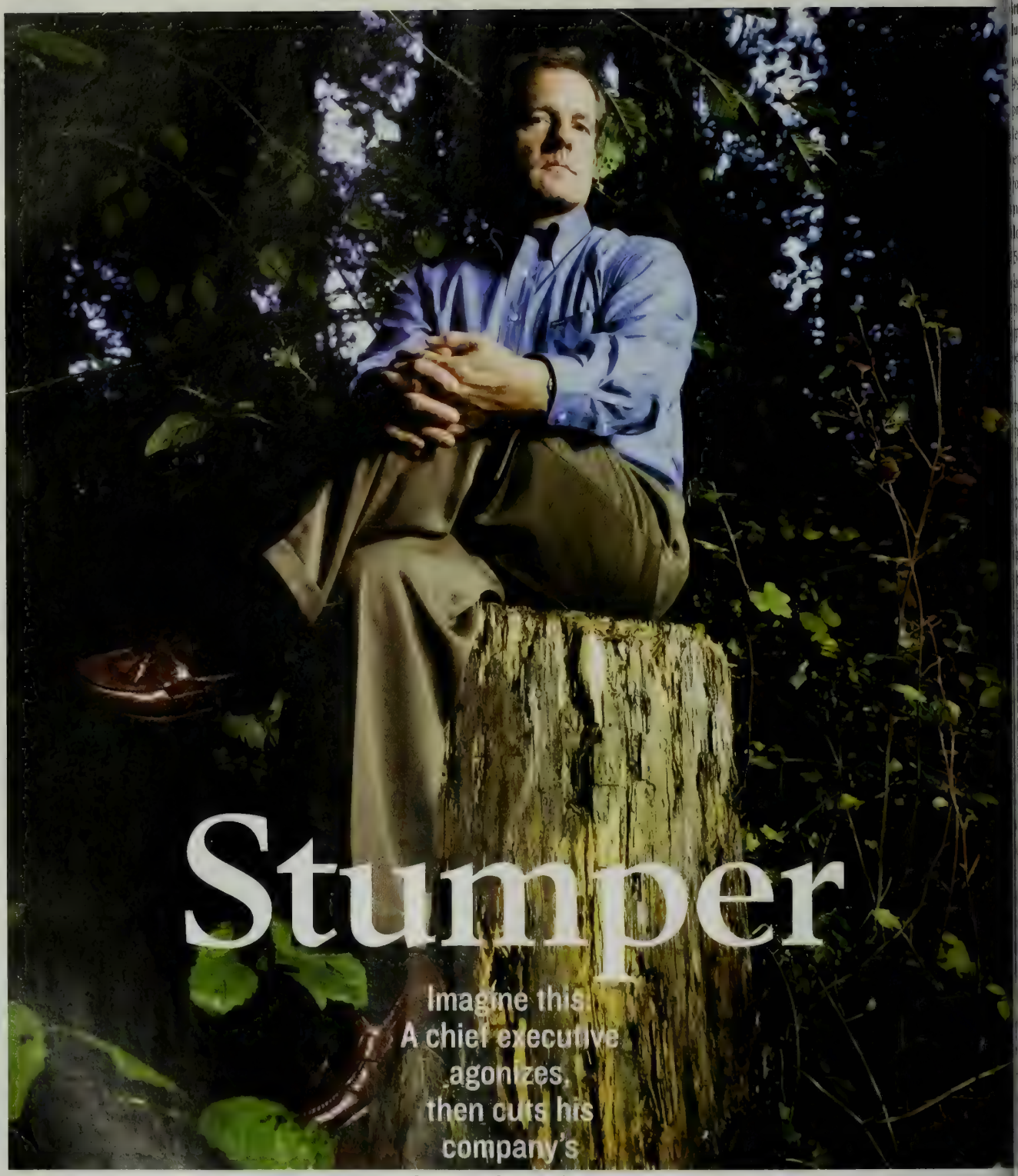


# Stumper

**Imagine this: A chief executive agonizes, then cuts his company's long-cherished dividend. Then the stock goes up. What gives?**

BY PHYLLIS BERMAN

INVESTORS IN PLUM CREEK TIMBER had every reason to be upset last month when chief executive Richard Holley announced the quarterly dividend would be cut to 35 cents from 57, slicing the yield to 5.8% from 9.8%. Since 1989 this Seattle-based real estate investment trust has returned an impressive average 19% annually to shareholders, including dividends and stock appreciation.

But Holley, 50, a former auditor for General Electric, had little choice. With the timber market glutted by Canadian imports—despite a 27% tariff imposed in May—Plum Creek's log prices had hit near-record lows. At $525 per thousand board feet, Douglas fir

**rting pretty:**
**um Creek Timber's Richard Holley.**

wlogs, for instance, hadn't been so low since 92. Since virtually all the company's income nsists of capital gains from timber sales to eorgia-Pacific (logs), Home Depot (lumlr) and Riverwood International (pulpood), the soft market had taken a huge toll Plum Creek's ability to generate cash. Had olley continued the dividend at the old rate, 98 million (revenues) Plum Creek would ve paid out $420 million in dividends over e last 12 months, against $250 million in erating income, in the sense of net before preciation, interest and taxes.

"Of course we couldn't keep paying out ore than we took in," he says, "but dropping e dividend was the hardest business decision ave ever had to make." Says Steven Cherver, an analyst for Great Falls, Mont.-based A. Davidson: "Here was this company that d been paying out ever-increasing dividends d suddenly had to reverse itself." Spun off om Burlington Resources in 1989 as a mas- limited partnership, Plum Creek became a IT in 1999 and last year merged with the mber operations of Georgia-Pacific. Plum eek now has 7.8 million acres in 19 states. s the second-largest private owner of timr in the country, after International Paper.

So did investors revolt at the dividend ws? Hardly. The stock actually bounced up the news—from a low (before the anouncement) of $18 per share on Oct. 10 to a cent $24 per share.

Why would that happen? Hidden behind e cut was some good news. Plum Creek is ll paying a handsome return. That 5.8% anual yield is taxed only at a capital gains rate 20%—a big plus for investors in high-tax ates like New York or California. Moreover, ost analysts believe the timber industry, overing near its cyclical low, will almost cerinly bounce back within the next year or so, suming housing demand remains strong. he Hancock Timber Resource Group, a subdiary of the insurance company, notes that uring the last 21-year period, the return on mber investment has averaged 13.3%, versus .6% for stocks.

Over the short term look for Plum Creek keep more trees in the ground. On averge the company harvests 18 million tons to million tons of timber annually, or about % of its holdings. But Holley will tweak that, epending on prices. He figures his trees grow 7% a year on average. So even if Plum Creek is forced to wait to harvest until prices go up, the return from waiting will be far greater than just the price increase alone.

While he waits Holley has plenty of land to sell off for other uses—about 400,000 acres, or about 5% of Plum Creek's total holdings. He estimates that parcels for development will go for anywhere from 2 to 20 times what it could get from timberland values alone, up to $24,000 an acre.

So last year Holley hired Thomas Lindquist, a seasoned executive from Trammell Crow, the big real estate company. "We won't build houses," Lindquist says. "What we will do is develop some parcels of property up to the point others can do so."

For example, the company has subdivided land that was once part of the Cypress Creek Ranch in Texas into 5-acre parcels; it is getting three times what the timber itself would bring and retaining the right to harvest some timber on a 50,000-acre parcel that landowners will use for hunting.

Plum Creek owns lots more of that kind of property, much of it fronting lakes in Maine, Wisconsin and Montana; it is one of the largest private owners of lakefront property in the nation. So with returns from timber depressed, revenues from real estate sales will increase to $90 million this year, up from $83 million last year.

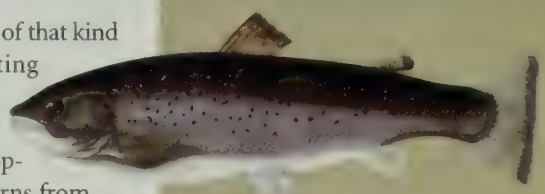
Does this mean Plum Creek is slowly liquidating itself? Hardly. At the same time the company has been selling, it's also been adding to its land holdings. Last year's $3.6 billion merger with Georgia-Pacific's timber operations doubled its timber holdings. "Just because lumber prices have been depressed, the same isn't true for timber land," he explains. "We are very conservative. We won't overpay." Plum Creek has $270 million in cash and total debt-to-capital of 40%, compared with 54% for International Paper and 66% for Weyerhaeuser. "We're underleveraged," says Holley.

While land prices remain high, and the price for the timber it produces low, Holley will bide his time. When he announced the dividend cut he also announced that he was authorizing $200 million of company capital to buy up Plum Creek's own shares, all of the purchases with cash thrown off by the business, not borrowed money. "The cheapest way to own timber," says Holley, "is [for us] to buy Plum Creek shares." F

## Fish Story

**It was 1997 when Plum Creek learned that something called the bull trout would be put on the endangered species list. Uh-oh. This large-mouthed fish is very finicky: The adult needs temperatures lower than 64 degrees to thrive; its eggs need an even colder clime. Bad news for Plum Creek, since it's the largest known private owner of bull trout habitat.**

**So Chairman Richard Holley, who believes "the way to manage regulation is to get in front of it," began to negotiate a Habitat Conservation Plan, or HCP, with the U.S. Fish & Wildlife Service and the National Marine Fisheries Service. An HCP gives a company the right to "violate" certain aspects of the Endangered Species Act. This allows Plum Creek to**



**"incidentally harm" fish in return for taking steps that would result in a net gain to the fish's habitat over 30 years. Plum Creek signed the deal two years ago.**

**But of course that wasn't the end of it. This year Trout Unlimited and the Pacific River Councils said they'd sue the two government agencies because Plum Creek's HCP was too vague. In a preemptive strike, Plum Creek filed a suit of its own in the U.S. District Court of Idaho, naming both the government agencies and the environmentalists as defendants, asking the court to declare its plan valid.**

**Now the nonprofits are demanding that Plum Creek withdraw its lawsuit. The argument? There's no controversy, since the two environmental groups haven't yet filed suit. Stay tuned—as the bull trout joins the spotted owl as one of the most litigated species in the history of the Endangered Species Act.** *—P.B.*

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# The Technophobes

## A guide to assorted Luddites, labor monopolists, muddled intellectuals and otherworldly pietists who kept resisting modernity even as it overwhelmed them.

**BY DAN SELIGMAN**

IT IS HARD TO RESIST TECHNOLOGY'S endless landslide, but people keep trying. Why? One discerns four possible reasons:

**FIRST CASE:** The new technology threatens the material interests of some groups. An esoteric example, now largely forgotten, arose from the sudden popularity, early in the last century, of margarine. Based on vegetable oils, the new spread obviously represented big trouble for butter. The dairy industry responded by attacking margarine as a threat to healthy diets—this was before Americans had heard of cholesterol—and, since the new stuff looked like butter, as an exercise in consumer fraud. Allegedly to forestall fraud, but actually to make the new competitor seem as weird as possible, dairy lobbyists persuaded many state legislatures to outlaw yellow margarine, and so many a consumer had to take home white vegetable fat and add yellow food coloring on the kitchen counter.

Less esoteric and more pervasive were wars against new technologies that threatened jobs. A typical union reaction was to demand that new work be found for the suddenly redundant employees, even if the new work was of no economic value. So we entered the era in which newspaper publishers were stuck with typographers whose job was to set "bogus" type. Or sometimes not even that. Thirty years ago there was a place in the New York Times building called the Rubber Room. The reference, you will (possibly) be relieved to hear, was to rubbers of bridge. It seems that members of the printing-trade union would report for work, play bridge for eight hours, then go home.

The Rubber Room was made possible by two French inventors, René Ligonnet and Louis Moyroud, who developed a machine, ultimately called the Photon, that set characters electronically on film. It eliminated the need for the kind of artisans who had, for the previous 500 years, moved metal type around. Unable to get financing in France, the inventors crossed the Atlantic, and soon had American newspaper publishers panting to get in on the Photon. The device could spin out type at least four times faster than the Linotype machine. It could be operated by inexpensive clerical workers hired off the street in place of the high-paid members of the International Typographical Union. The Photon represented disaster for the ITU, and the union's New York Local 6, run by hardball player Bertram Powers, led a strike from 1962 to 1963 that shut down all New York City newspapers for 114 days and terminated the life of New York's *Mirror*. The union ultimately won lifetime employment contracts for printers, many of whom took up bridge.

**SECOND CASE:** The new technology is thought to be unhealthy. Here the paradigmatic examples were DDT and other pesticides, and their principal adversary was Rachel Carson, author of the 1962 bestseller *Silent Spring*. The book inspired the creation of the Environmental Protection Agency and the environmental philosophy of Al Gore. Carson, a marine biologist by training, wrote with a kind of poetic power and scared the socks off thousands of readers with apocalyptic passages like: "One of the most sinister features of DDT and related chemicals is the way they are passed on from one organism to another through all the links of the food chain. ... The breast-fed human infant is receiving small but regular additions to the load of toxic chemicals building up in his body. ... There has been no such parallel situation in medical history. No one yet knows what the ultimate

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consequences may be."

Fortifying this dreadful storyline was the fact that Carson died two years after the book's publication—of breast cancer. Many environmentalists think that toxic chemicals are an important cause of breast cancer. DDT was banned in the U.S. in 1972.

But today the Carson argument is seriously suspect. DDT has been enormously successful in wiping out malaria in undeveloped countries worldwide—no other pesticide does the job as well—and there is no evidence that this huge benefit has been offset by increased cancer rates. It is not clear that DDT is carcinogenic to humans, and if it is, the effect is clearly weak. The World Health Organization has found that "the only confirmed cases of injury [from DDT] have been the result of massive accidental or suicidal ingestion." An interesting question is whether Rachel Carson's policy influence might actually have *increased* the incidence of cancer. It now seems clear, at least, that the pesticides she was concerned about had little if any effect on cancer, while restricting use of pesticides raises the price and reduces the consumption of fruits and vegetables—which are important inhibitors of cancer.

Echoes of these 40-year-old arguments may be picked up nowadays in the worldwide debate over the safety and legitimacy of genetically modified foods. While few would deny that we need to pursue research on the long-term health effects of such foods, the evidence thus far plainly shows that the new technology holds considerable promise of lowering fruit and vegetable costs, and thus enhancing human health.

**THIRD CASE:** New technologies are resisted because they are viewed, correctly, as fostering economic growth, and growth is viewed, incorrectly, as bad for the human species.

Prominent on the antigrowth track was Lester Brown, founder of the Worldwatch Institute. Another famous member of the school was Paul Ehrlich of Stanford, a tireless pessimist who was endlessly arguing, just like Thomas Malthus (1766-1834), that natural resources are limited but there is no natural limit to human populations—so it is only a question of time before we have overcrowding, famine and pestilence. In his 1968 book *The Population Bomb*, Ehrlich said it was already too late to prevent huge worldwide famines in the 1970s. ("The battle to feed all of humanity is over. In the 1970s and 1980s hundreds of millions of people are going to starve to death in spite of any crash programs embarked upon now.") Ehrlich had an equation to prove it: I = PAT. That means the Impact of growth can be quantified by looking at Population multiplied by Affluence (i.e., consumption) and multiplied again by Technology.

The grim Malthusian argument that growth means starvation climaxed in a 1972 book by the Club of Rome, *The Limits to Growth*, spelling out the timetable on which the world would run out of this or that essential raw material. It sold 12 million copies in 37 languages.

## Paul Ehrlich's equation said hundreds of millions would starve.

But it was all involved nonsense, and Ehrlich had the bad luck to demonstrate his folly by making a bet guaranteed to get extensive media coverage. The bet was with economist Julian Simon of the University of Maryland. Both men agreed that if Ehrlich's model of the problem was valid, then basic commodities would be increasingly scarce and rising in price. Simon's data told him that, on the contrary, commodity prices were in continual decline, and he offered to bet $1,000 that any raw materials one picked would decline in price (in real, inflation-adjusted terms) over a period of at least a year. Ehrlich and two of his colleagues sprang for the deal and said that a "basket" of chromium, nickel, copper, tungsten and tin would rise in price over a ten-year period. They lost ignominiously: The real price of every one of the metals declined during the decade. Far worse, from Ehrlich's point of view if not humanity's, was the subsequent relentless improvement in living standards worldwide. In place of famine and death, the global population has seen a steady increase in per capita calorie consumption (up 24% since 1961 and up 38% in developing countries). Life expectancy has also grown steadily, from around 30 years in 1900 to 67 in 2000.

**FOURTH CASE:** The technology is said to offend religious faith. It is always possible to find a certain number of environmentalists identifying their own policy prescriptions with God's will, or to find preachers in pulpits with strong views about our need to embrace the Kyoto Protocol on global warming. Right now the religion/technology nexus is conspicuously embodied in a much hyped coalition of Christian and Jewish groups that is "linking fuel efficiency to morality," as the *New York Times* put it and positing that Jesus would not drive a sport utility vehicle.

And yet it is possible to point to at least one religious group that has had a fair amount of success in resisting technology. Not total success, but definitely above average. The group in question is the Pennsylvania Dutch—the Mennonites of Lancaster County, and especially the Amish. Back in 1919 the Amish made a fateful decision to turn their backs on electricity and declined to connect their farms to the power grid. They still do without electricity, cars or flush toilets and their principal farm equipment is a horse-drawn tractor with metal wheels. They resist modernity because easy access to the outside world could, in the words on an Amish Web site, "lead to many temptations and the deterioration of church and family life."

The Amish and other Mennonites make up a small fraction of the population, but a sizable number of people embrace environmentalism with a quasireligious fervor that opposes technological progress on the theory that the good old days of horse-drawn sleigh were less sinful. Whether such believers would be willing to accept 30-year life spans as a price for turning the clock back is another matter. ■

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# Lord Charles

FOR MORE THAN A YEAR HARVEY PITT, THE UNPOPULAR Securities & Exchange Commission chairman, fended off critics clamoring for his resignation. Despised by Democrats, viewed as a political liability by many Republicans and widely distrusted by investors of all ideological stripes, Pitt seemed determined to gut it out for as long as possible.

But then, on the eve of George Bush's midterm electoral sweep, a cataclysm occurred. When he least expected it, just as the President who had appointed him to his SEC post was gearing up to smash the Democratic party to smithereens, Pitt received a disturbing call from New York's ranking Democratic senator, Charles E. Schumer.

Schumer, a man who had admired the SEC chief so much that he once referred to him as "the Zeus of the field," not only telephoned Pitt and told him to resign, but relayed the substance of the conversation to the *New York Times*. From that moment on Pitt was a goner. He had ignored the catcalls of political rivals, the whispering campaign of supposed allies and the coarse epithets of the feckless hoi polloi. But once Chuck Schumer got on the horn, his fate was sealed. Like Napoleon at Waterloo, like Cornwallis at Yorktown, like Hannibal at Zama, Pitt knew that it was time to throw in the towel.

**Insiders say phone calls from The Terminator were also instrumental in Andrew Cuomo's decision to drop out of the New York gubernatorial race.**

Though it may come as a shock to the public, this was not the first time that a surprise phone call from Chuck (The Terminator) Schumer had persuaded an entrenched egomaniac to fall on his sword. It is now widely believed that the New York Mets' volatile skipper, Bobby Valentine, agreed to surrender the helm last summer only after Schumer (who had once labeled him "the Prometheus of the field") rang up.

"Bobby could ignore the fans, the media and even the éminences grises that run the Mets," says one source. "But once Chuck Schumer got on the phone and told him to fold his tent, Bobby V. took the pipe.'

Insiders say that phone calls from The Terminator were also instrumental in Andrew Cuomo's decision to drop out of the New York gubernatorial race, Fox's decision to cancel *Ally McBeal* and Rosie O'Donnell's decision to step down as editor of *Rosie* magazine.

"Rosie could have survived the declining ad pages, the catastrophic drop in circulation and the fact that just about everybody in America hated her," says a sapient magazine industry observer. "But after she got that midnight phone call from Chuck, who had once referred to her as 'the Narcissus and Goldmund of the field,' Rosie knew it was time to call it a day."

It is not entirely clear what makes a phone call from Chuck Schumer such an apocalyptic event in a public figure's life. Generally uncharismatic, he is not as well known to the American public as many other Democrats, nor is he an especially cogent public speaker. Now that the Democrats have been routed, he is actually in danger of playing second fiddle in the Senate to his upstart colleague, Hillary Clinton. Yet those who have received witching-hour phone calls from Schumer in the past invariably cite his hypnotic powers of persuasion.

"You don't mind if everybody, including your wife, children and mother, curses the very day you were born," says a Silicon Valley chief executive who immediately emptied his desk after receiving a call from Schumer. "It's more a case of, well, if Chuck Schumer doesn't like you anymore, what's the point in living? Chuck Schumer likes everybody."

"It's very hard to get a call from a guy who once described you as 'a Poseidon of the field' and then be told that it's time to pack it in," adds a Navy Department honcho who recently resigned his post. "The thing is, once Chuck tells you that he doesn't think you're Poseidon anymore, you stop feeling like Poseidon."

In the days and weeks to come, Schumer has a number of important phone interviews scheduled. AOL Time Warner's Steve Case ("a Polyphemus") will soon be getting a call from The Terminator, as will Michael Eisner ("an Apollo"), Tom Daschle ("an Achilles") and Terry McAuliffe ("Titus Andronicus, Samson Agonistes and Orpheus, all rolled into one"). One can only hope that Schumer will also find time in his busy schedule to tell Don Chaney to step down as head coach of the New York Knicks, Madonna to retire from the motion picture industry and Saddam Hussein to relinquish his position as president of Iraq. While he's at it, he might put in a phone call to Al Gore and tell him to go away for good. That one he could charge to the taxpayers. F

Forbes

**Joe Queenan** writes a bimonthly column for *GQ*. His latest book is *My Goodness: A Cynic's Short-Lived Search for Sainthood*. Visit his home page at www.forbes.com/queenan.

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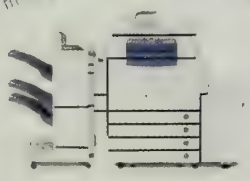

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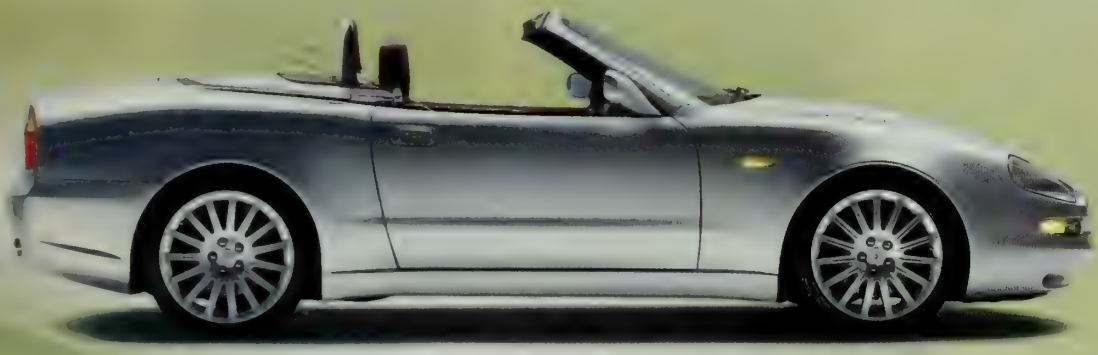

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# Years & Ideas

This magazine was created the same year as the Bolshevik revolution—and has outlived that experiment by nearly a dozen years. Then, as now, the world was in turmoil. Yet today the new ties that bind nations are based not on coercion—a lashing together of explosive ethnic mixes like Danzig and Yugoslavia—but on enlightened and mutual self-interest, promising greater stability and prosperity. Former Soviet republics and Eastern bloc countries are the newest members of NATO; Russia is now an American ally in the war against terrorism. China's Communist Party, reaching out to entrepreneurs, is capitalist in all but name.

In this special issue of FORBES, we celebrate two forces that are bringing the world closer together: innovation and capitalism. These recognize no boundaries; great ideas migrate across borders, despite all attempts to stop them. Beginning on page 124 we list our choices for the 85 most consequential innovations since 1917. Following are five essays on capitalism and invention, and then profiles of 15 outstanding innovators of today. —*Tom Post*

# 85 Innovatio

What are the greatest breakthroughs of the last four score and five years? A collection of people, products, services and companies that have changed our lives in a profound way. This is not a list of the greatest business minds—that's why you won't find Bill Gates on it. It is not a roster of the deserving (Gandhi) or the powerful (Stalin) or the biggest empire builders (Kaiser). It is a history of lightbulbs that went off and changed the world. The transistor gave rise to a trillion-dollar piece of the economy and a potent deflationary force. The pill altered human behavior; the polio vaccine and protease inhibitors altered life spans; the discount brokerage changed our capital markets. What will the next 85 years bring? We give some early hints in the profiles that begin on page 274.

BY DAVID ARMSTRONG, MONTE BURKE
EMILY LAMBERT, NATHAN VARDI, ROB WHERRY

Forbes.com Can't find your favorite invention on the list? Get involved and tell us online. For a list of also-rans (did you know that the fax machine was invented in 1843?), visit us at www.forbes.com/85th.

ns

## 1917
## Sneakers

When U.S. Rubber introduced Keds, the first mass-marketed rubber-soled sneaker, the company used the reigning color scheme for men's leather shoes: black soles and brown canvas uppers. Keds remained a big seller until the late 1960s, when sneakers got a face-lift from University of Oregon track coach Bill Bowerman, whose waffle-soled running shoe would form the foundation of Nike and trigger an explosion in the athletic shoe business.

Arthur Dempster

## 1918
## Mass Spectrometer

University of Chicago professor Arthur Dempster (1886-1950) revolutionized chemical analysis with an instrument that measures the weight of isotopes and detects chemicals present in minute quantities. The Toronto-born inventor also discovered uranium 235, the fissile version of the heavy metal atom. He later worked on the Manhattan Project.

# 1921
## Tetraethyl Lead

To make a gasoline engine efficient you need a high compression ratio—but that leads to a kind of misfiring called "knocking" that sabotages power. Holed up in a lab in Dayton, Ohio, Thomas Midgley (1889-1944) spent five years searching for a fuel additive to stop the knocking. Lead did it, until recent alternatives made it feasible to phase out this pollutant. Midgley's other great creation, the nonflammable refrigerant Freon, is now going the way of leaded gas.

Walt Disney

# 1923
## Multiplane Camera

With his brother Roy, Walt Disney (1901-1966) turned a small animated cartoon shop into an entertainment epic, first with silent Mickey Mouse strips, next with feature films (*Fantasia*, *Cinderella*, *Peter Pan*), then with theme parks, his playgrounds of fantasy. Though Disney will always be remembered for characters like Goofy and Donald Duck, his biggest contribution to filmmaking was developing the multiplane camera. Traditional animation stacked cells on top of each other, giving little sense of depth. The multiplane camera got around that by placing each cell at a different level, allowing elements of a scene to move independently, giving them more realistic dimension. Moviegoers first experienced the magic with *Snow White and the Seven Dwarfs* in 1937.

# 1923
## Business Management

Long before Steven Covey and Tom Peters, Alfred P. Sloan (1875-1966) created modern corporate management as he rescued an ailing General Motors and made it the most powerful corporation in the world. He reinvented governance with an independent board of directors and executive and finance committees—a balance of power that has slipped lately. He decentralized decision-making for divisions that met financial benchmarks, a style widely imitated.

Alfred P. Sloan

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To accomplish this, we will focus on our vision to be an international leader – a financial services organization whose operational excellence is second to none. We intend to attain that leadership position through strategic growth in Nort America and internationally, with innovative products an services that fill distinct market needs, and by building shareholder value through a strategic business model that balances protection and wealth management for optimun long-term performance.

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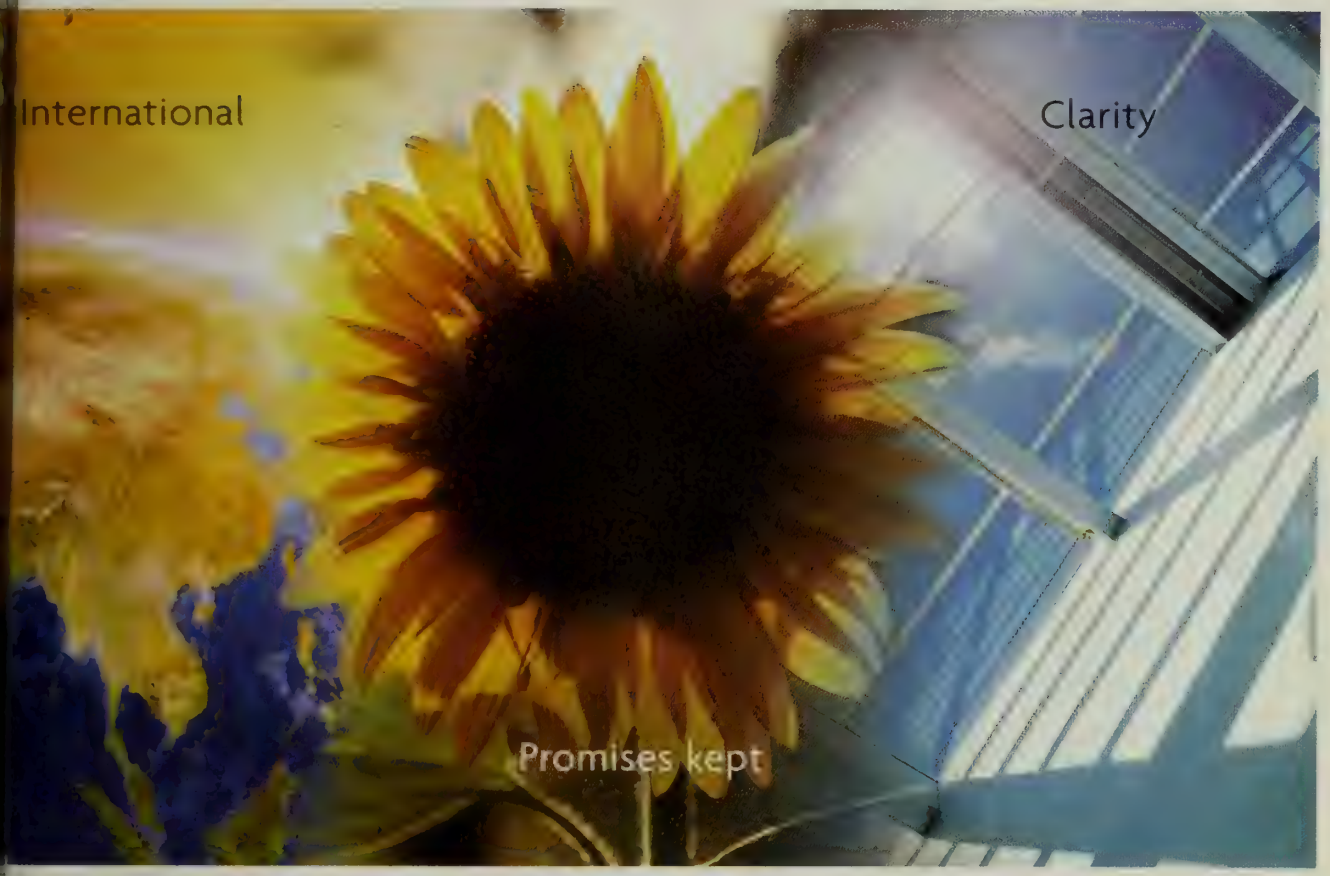


# Our Values show us how.

Our values demand that we establish realistic expectations apply innovative thinking, sound business planning and dis-ined management to help us meet targets, achieve goals continuously build shareholder value.

We relentlessly seek excellence in the products we develop, services we provide, the people we employ and the work they do. And we focus intensely on our customers, large and small, and continuously work from their perspective.

We commit to clarity and transparency. We operate to exceptional standards of business ethics, constantly upholding and protecting our long-standing reputation for corporate integrity.

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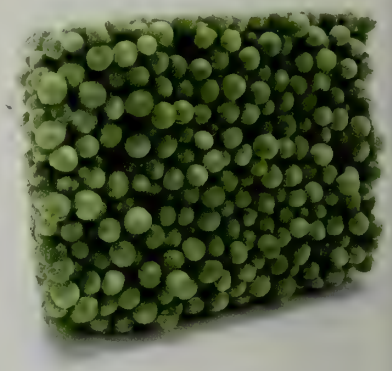
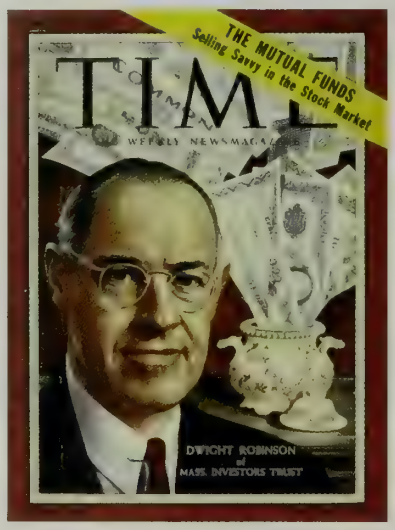
# 1924
## Frozen Food

Until Clarence Birdseye (1886-1956) came around, cooking and cryogenics had little in common. A college dropout who worked as a naturalist for the U.S. government, Birdseye noticed how natives in Labrador froze fresh fish to preserve its taste. Experimenting with other foods, Birdseye perfected the freezing process in the U.S. and, in 1924, opened a frozen seafood company in New York City. By 1934 Birdseye's frozen meats and vegetables filled grocers' coolers around the country, turning lima beans and peas into enemies for millions of kids.



# 1924
## Mutual Fund

Founded by L. Sherman Adams, Charles H. Learoyd and Ashton L. Carr, Massachusetts Investors Trust became the world's first open-ended investment fund, with $50,000 in capital. Using brokerage channels to market shares to the public, the trust expanded its assets to $14 million in five years. The fund lost 83% following the stock market crash of 1929, but the organization survived and introduced a second fund in 1934. Today $6.1 trillion is invested in mutual funds.




# 1925
## Bell Telephone Laboratories

**Building blocks of genius: HQ of Bell Labs.**

Pulled out of retirement for his second stint as president of AT&T, Theodore Newton Vail (1845-1920) combined the engineering departments of AT&T and Western Electric. The result: a research juggernaut that has earned six Nobel Prizes, nine U.S. Medals of Science, six Medals of Technology and other awards. Among its achievements: the transistor, the touch-tone telephone, data networking, digital transmission and switching, optical communications and the digital signal processor. Today Bell Labs survives in shrunken form as part of Lucent Technologies, which was spun off from AT&T in 1996.

# 1926
## Rocket Engine

Inspired as a child by H.G. Wells' *War of the Worlds*, Clark University physicist Robert Hutchings Goddard (1882-1945) spent most of his professional life developing mathematical theories on combustible propellants and theorizing that rocket engines could produce sufficient thrust to make space flight a reality. He put them to use in 1926, launching the first rocket from a field near Auburn, Mass. Favoring a nose-mounted engine that burned liquid fuel, his 10-foot projectile went only 41 feet into the air. A small flight for the capsule, a first giant step in rocketry.

**Space cadet: Work by Robert Goddard helped launch NASA.**

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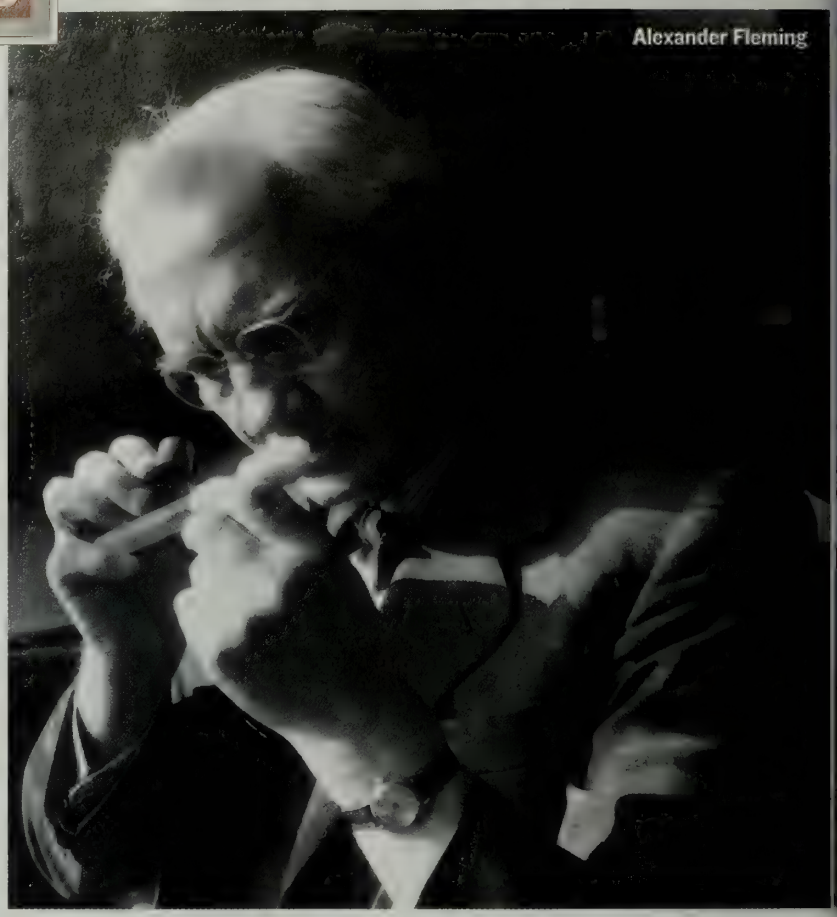
# 1927
## Television

At age 15, Philo Taylor Farnsworth (1906-1971) presented his high school chemistry teacher with a design for electronically transmitting images over long distances. Four years later he developed a cathode ray tube for image making: a vacuum tube in which electrons illuminate a phosphor. In 1927 he transmitted the first all-electronic image, a horizontal line. Farnsworth spent his later years working on missile guidance systems and nuclear fusion, but his first invention had the bigger impact on the world.

**Philo Farnsworth gave up work on the idiot box for more important work—missiles.**



Alexander Fleming

# 1928
## Penicillin

After working in field hospitals during World War I, Alexander Fleming (1881-1955) struggled to find a cure for the infections that killed more soldiers than bullets did. He came up empty—until one day, cleaning up his cluttered lab and sifting through old petri dishes, he discovered that a mold killed staph bacteria. Penicillin landed him a Nobel Prize in 1945.

# 1929
## Synthetic Rubber

Belgian-born Julius Nieuwland (1878-1936) was a man of the cloth—and a man of artificial fabric. In 1929 the Notre Dame and Catholic University graduate discovered that acetylene could be polymerized into an elastic substance. Two years later DuPont, which funded his research, marketed the material as neoprene, a synthetic rubber still favored for cable insulation, wet suits and beverage coolers.

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1998, the Beverage Testing Institute of Chicago conducted a blind taste test more than 40 vodkas. They awarded points based on smoothness, nose, d most importantly, taste. Of all the vodkas, Grey Goose® Vodka nerged victorious, receiving 96 points out of a possible 100.

unded in 1981, the Beverage Testing Institute conducts tests in specially designed lab that minimizes external factors and aximizes panelists' concentration. The Institute selects dges based on their expertise, and its tasting and oring procedures are widely praised as e best in the industry.

| re | Vodka | Country |
|---|---|---|
| | GREY GOOSE® VODKA | FRANCE |
| | Canadian Iceberg Vodka | Canada |
| | Stolichnaya Gold Vodka | Russia |
| | Staraya Moskva Premium | Russia |
| | Van Hoo Vodka | Belgium |
| | Stolichnaya Vodka | Russia |
| | Tanqueray Sterling Vodka | England |
| | Rain 1995 Harvest Vodka | USA |
| | Ketel One Vodka | Holland |
| | Wyborowa Vodka | Poland |
| | Kremlyovskaya Vodka | Russia |
| | Finlandia Vodka of Finland | Finland |
| | Alps French Vodka | France |
| | Skyy Vodka | USA |
| | Original Polish Vodka | Poland |
| | Glenmore Special | USA |
| | Fleischmann's Royal Vodka | USA |
| | Mr. Boston Vodka | USA |
| | Pole Star Vodka | Poland |
| | Luksusowa Potato Vodka | Poland |
| | Absolut Vodka | Sweden |
| | Cardinal Vodka | Holland |
| | Barton Vodka | USA |
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# 1930
## Jet Engine

As a cadet in the Royal Air Force, Sir Frank Whittle (1907-1996) wrote a thesis that radically changed the future of aircraft design. Whittle predicted that a system of turbines and compressed air that burned vaporized fuel would make propellered craft obsolete. He patented the system in 1930 but spent another decade getting the turbine off the ground. In a 1941 test flight the world's first jet reached 370 miles per hour, far faster than propped planes.

# 1933
## Wallboard

One of the cleverest ideas in home building since the invention of bricks was unveiled in 1933—preformed plaster walls. Thus was ended the huge cost of lath-and-plaster crews that used to finish the insides of buildings. This mixture of recycled paper and the cheap mineral gypsum is cheap, to boot: Industry insiders say this is the only business where you can sandwich dirt between two layers of garbage and get money for it. Inventor U.S. Gypsum has lots of imitators now but still owns the popular moniker for the product, Sheetrock.

# 1933
## Frequency Modulation

Forget Howard Stern. The real force behind modern radio is Edwin Howard Armstrong (1890-1954). By 1913 he figured out how to amplify radio signals with a feedback loop. During WWI he improved reception and made tuning in signals easier with the superheterodyne circuit, a component that transforms high-frequency waves into intermediate-frequency waves. His biggest hit in communications came with his radical notion that radio signals should transmit data by variations not in amplitude but in frequency. By this scheme he eliminated much of the static that plagued traditional AM broadcasts. The broadcast industry, heavily invested in AM, tried to stop him, but FM eventually won the day. It's also the electronic format for TV and space communication.

**High-wire act: Armstrong built his first radio tower while in college.**

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# 1934
## Value Investing

For most of human history, investing has had a large emotional streak. Not long after the bottom of the Great Crash, Benjamin Graham (1894-1976) and David L. Dodd (1895-1988), both Columbia University professors, published *Security Analysis*, which created for the first time a rational basis for evaluating stocks and bonds. The book has served as a bible for investors ever since; the most famous disciple of Graham and Dodd analysis is Warren Buffett.

Benjamin Graham

# 1934
## Nylon

A personnel shortage during WWI left Tarkio College undergraduate Wallace Hume Carothers (1896-1937) in charge of the school's chemistry department. He later earned a professorship at Harvard, then a research job at DuPont. There he created the first synthetic fiber. Carothers didn't live to see nylon's success as a classy substitute for silk stockings and as a multipurposed industrial material. A depressive, he committed suicide in April 1937.

# 1935
## United Auto Workers

Under Walter Reuther (1907-1970) the United Auto Workers union abandoned Teamsters-like militancy for collective bargaining. Perhaps he had learned his lesson in the Soviet Union, where he worked briefly in a car factory after losing his job at Ford Motor during the Depression. Back in the States, Reuther survived beatings and an assassination attempt. His UAW helped establish benefits now standard in employee compensation, including cost-of-living increases, employer-paid health plans, tuition-refund programs, life insurance and profit sharing.

Walter Reuther

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# One curtain fell.

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**Los Angeles County Museum of Art**
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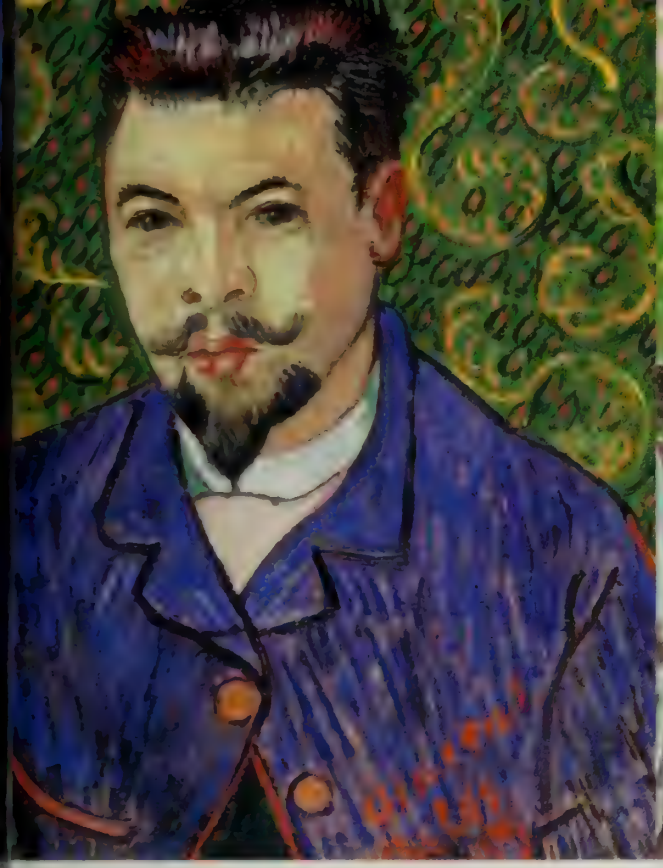
© 2002 Philip Morris Management Corp. *Left to right:* Paul Cézanne, *Pierrot and Harlequin*, 1888, The State Pushkin Museum of Fine Arts, Moscow. Pablo Picasso, *Harlequin and his Companion (The Sa[illegible]* [illegible] 2002 Estate of Pablo Picasso/Artists Rights Society (ARS), New York. Vincent van Gogh, *Portrait of Doctor Rey*, 1889, The State Pushkin Museum of Fine Arts, Moscow. Henri Matisse, *Goldfish* (detail), 1912. © 2002 Succession H. Matisse, Paris/Artists Rights Society (ARS), New York.



# Now, another rises.

## From Russia, the greatest collection of French masterpieces you've never seen

The curtain goes up on a landmark exhibition of legendary paintings from the Paris art scene — by Cézanne, Picasso, van Gogh, Matisse and more. For the first time, these Russian treasures are here in America in *Old Masters, Impressionists, and Moderns: French Masterworks from the State Pushkin Museum, Moscow.*

The arts speak in a universal language, inspiring us to envision new possibilities and reach ever higher. In this spirit, the people of Philip Morris are proud to support this exhibition and the groundbreaking cultural partnership between the Museum of Fine Arts, Houston and Russia's State Pushkin Museum that made it possible.

**Supported by Philip Morris Companies Inc.**

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# 1937
## Pulse-Code Modulation

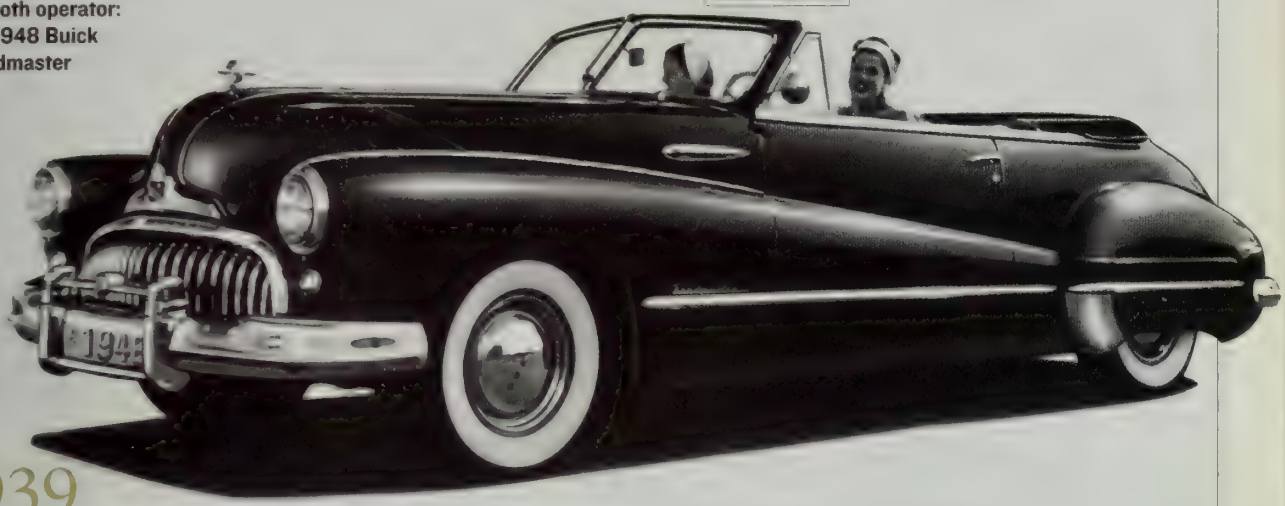
Alec H. Reeves (1902-1971) laid the foundation for the digital age. Working as an engineer at International Telephone & Telegraph, Reeves developed a communication system that could transform voice signals into electronic pulses—abstractly, ones and zeros—send them along standard phone lines and reconstruct them into an analog signal at the receiving end. The system enabled signals to travel long distances without distortion. Decades later, PCM became the basis for fiber optics, CD players, cell phones, Internet telephony and satellite communications.

# 1937
## Blood Bank

Building on the idea of the "blood depots" set up for wounded soldiers in WWI, Budapest-born physician Bernard Fantus (1874-1940) created the first blood bank at Cook County Hospital in Chicago. Thanks to breakthroughs in anticoagulants that allow blood to be stored for weeks, his idea spread quickly to cities like New York, San Francisco and Miami, saving countless lives by providing for immediate supplies of blood.

# 1938
## Xerography

Tedium, not toner, was the mother of this invention. Working as a patent lawyer in New York, Chester Floyd Carlson (1906-1968) grew tired of making copies of patent applications and law textbooks. In 1934 he began work on a machine that could transfer an image produced on a photoconductive plate with exposed light to a plain sheet of paper. He succeeded four years later. In 1946 he struck a deal with Haloid Co., which introduced the first commercial copying machine. They called it xerography: "xeros" for dry, "graphos" for picture. Haloid became Haloid Xerox before dropping the first part of its name.



Smooth operator: the 1948 Buick Roadmaster

1939

## Automatic Transmission

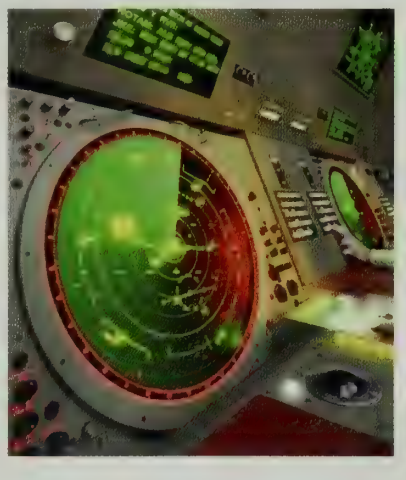
A clackety transmission on an old Pierce-Arrow sent Earl Thompson on a 30-year quest to smooth things out. His answer: the Hydra-Matic, the first mass-marketed automatic transmission. Installed in 1940 Oldsmobiles, the new transmissions attracted 25,000 orders in their first year. The U.S. military liked them, too: They were put into light tanks used during World War II.

1939

## Helicopter

Thanks to his obsession with vertical flight, Igor I. Sikorsky (1889-1972) forever changed the face of warfare, rescue and travel. Born in Russia, Sikorsky fled to the U.S. after the Bolshevik Revolution. Soon after, he started the Sikorsky Aero Engineering Corp. (now part of United Technologies), where he developed the amphibious airplane and the boat plane, both of which opened air travel to South America. In 1931 he patented the now-familiar design for the helicopter: one main rotor overhead and one vertical tail rotor, a design breakthrough that gave the whirlybird its unique maneuverability. In September 1939 he built the first practical helicopter, the VS-300.

Igor I. Sikorsky

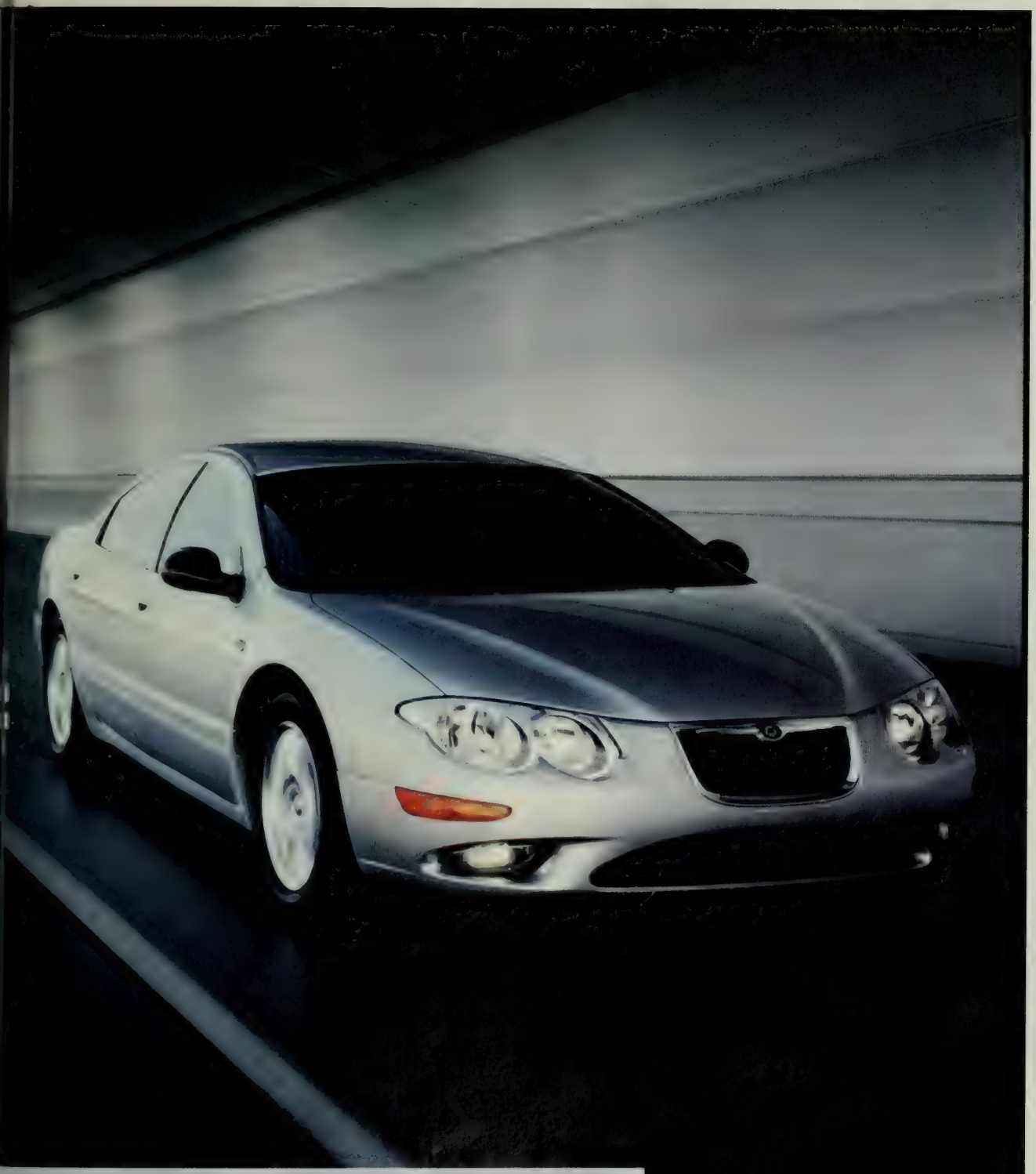


1940

## Radar

When Scottish physicist Sir Robert Watson-Watt (1892-1973) joined the National Physical Lab in 1935, he worked on early radar technology. Using shortwave radio, he figured out how to reflect electromagnetic waves off distant objects, then amplify the waves so they could be analyzed by a signal processor. Result: the first practical radar system—and all modern forms of navigation.

*Based on 2002 EPA Large Car Segment equipped with a V-6 engine.

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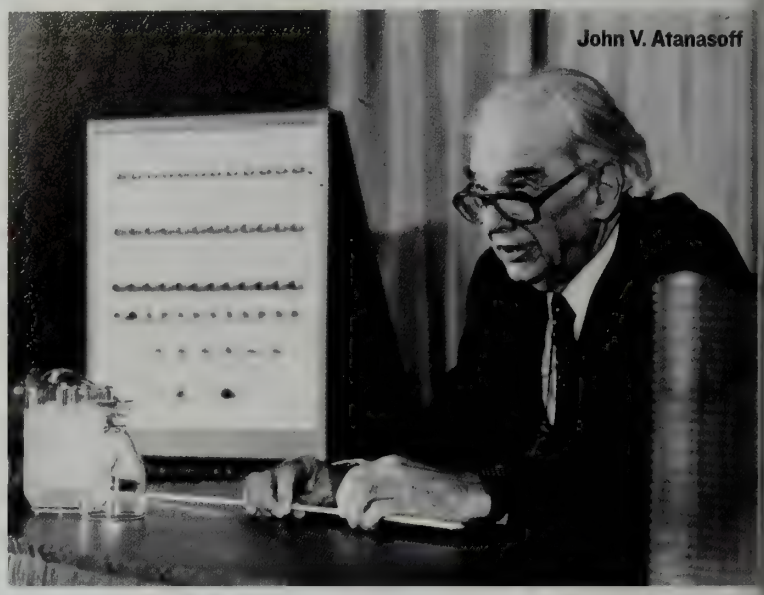
# 1942
## Electronic Digital Computer

After "an evening of scotch and 100mph car rides" Iowa State College physicist John V. Atanasoff (1903-1995) drew the idea for the first computer on the back of a napkin. His work resulted in several important ideas still used today: regenerative memory, binary arithmetic and combining certain logic gates to make an electronic adder. He finished his 700-pound, desk-size contraption in 1942. Though the underpinnings of his work were incorporated into the ENIAC computer, Atanasoff received little credit until a patent case acknowledged his work in 1973.


John V. Atanasoff

# 1945
## Nuclear Power

Over four da[illegible] August the U.S. dropped two [illegible]s on Japan, killing more than 20[illegible]ple. The explosions ended Wor[illegible] and ushered in the nuclear age. In 1[illegible] the world's first nuclear reactor w[illegible]t online at Shippingport, Pa., supp[illegible] power to the Pittsburgh area. B[illegible] hopes for a proliferation in nu[illegible] power in the U.S. dissipated after t[illegible] 1979 fiasco at Three Mile Island.

# 1947
## Cellular Phone

While at Bell Labs, D.H. Ring dreamed up a mobile telephone service that used low-power transmitters sprinkled throughout targeted calling areas. The FCC stymied the idea by limiting the number of radio-spectrum frequencies for mobile telephone service; it didn't reconsider its position until 1968.

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A bevy of brainiacs: transistor inventors Bardeen, Shockley and Brattain at Bell Labs

1947

## Transistor

No innovation in the last 85 years has had a greater impact than the transistor. Working for William B. Shockley at Bell Labs, John Bardeen and Walter H. Brattain noticed that when electrical signals were applied to contacts on a germanium crystal, the output was greater than the input. Their discovery revolutionized electronics by replacing vacuum tubes and mechanical relays, and opened the door for future breakthroughs in semiconductors and microchips. Its three inventors received a Nobel Prize for Physics in 1956.

1947

## Microwave Oven

Raytheon engineer Percy L. Spencer (1894-1970) brought kitchens into the space age. In 1945, while standing in front of an active magnetron tube, the heart of shortwave radar systems, a chocolate bar in his pocket began to melt. He struck gold after placing kernels of corn on the tube and watching them pop. Two years later: "Radarange," the world's first microwave oven; Raytheon came out with a commercial model in 1967.

1947

## Instant Photos

Tinkering with light polarization, Edwin Herbert Land (1909-1991) was able to reduce the glare in products like glasses, lamps and military goggles. He changed the world of photography after his daughter asked why she couldn't see her picture immediately after he had taken it. By fiddling with nonpolarizing filters, Land came up with a camera system that developed snapshots in seconds. The Polaroid camera allowed professional photographers to check their work; less serious shutterbugs simply got immediate gratification. Though the the process remains popular with professionals, nearly everyone else has abandoned it. Perhaps former Ford chief Jacques Nasser can put it back in focus.

Edwin Herbert Land

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# Suzhou Industrial Par

## A prime location fo foreign companie looking to establis a base in China.

With entrance into the Chinese market now a firm goal for many overseas businesses, the question for some time has been not when to enter the fray, but where. China's original five special economic zones offer favourable tax rates and excellent locations throughout the mainland. The latest zone to join the list however offers even more, including independent decision-making power that goes beyond any other area in China.

Suzhou Industrial Park (SIP), on the outskirts of the ancient city of Suzhou, is an exceptional base for Chinese operations. Effectively a city in its own right, SIP is just 70km from Shanghai, placing it right in the centre of the Yangtze Delta transportation hub and yet offering substantial savings on setting up in Shanghai itself.

From the twentieth floor of the SIP central offices, at the centre of the development, it is possible to see farmland on the horizon. The whole area was once agricultural land. But look closer in and the sheer scale of the park becomes apparent. Phase One of construction began in 1994, was completed four years later, and consists of 12 square km of lots. Phases Two and Three are still underway and extend the total area to 70 square km, across Lake Jingji and towards the entrance of the Huning express way which connects Shanghai and Jiangsu Province. By the time of completion, SIP will lie just half an hour away by road from Shangha

Governmental support has been one of the k ys to SIP's success. In 1994, the park was born, from an agreement igned by both China and Singapore ministers. This high-level involvement has conti and has meant that SIP has always enjoyed preferential condit For example, companies setting up in the area benefit from the one stop approval status of the park. Working through the authorities, newcomers can organise business license applicatio approval, documentation, utilities applications, custom cleara and so on, without having to apply to separate agencies. Fur more, SIP, unique amongst Special Economic Zones, is authori approve investment projects of unlimited size. Elsewhere in C approval authority is limited to US$ 30 million.

Favourable conditions have made doing business in SI attractive prospect. Financial statistics have also kept the regi the top of incoming companies wish-lists. GDP has grow average of 48% annually since 1994, and stands at over RMB 25 b for 2002. So far, the site has attracted a total investment of US$16 billion. Around 935 foreign enterprises have bases i park, of which, 43 are listed in the Fortune 500, including Sie Group, Samsung Electric, Nabisco Corporation, Black & D Group and Glaxo-Wellcome Inc.. Many of these companie already achieving profits.

Beyond the pure figures, however, Suzhou Industrial Park offers world-class infrastructure. One of the benefits of build city from scratch has been the opportunity to provide utilities su gas, electricity and water supplies, as well as sewage treatment telecommunications that exactly match the needs of inco companies. Urban construction planning has also ensured that r streetlights, green areas, and housing are combined to maximum benefit to new residents. SIP is also home to a range of educational establishments, including kindergar

and middle schools and even a vocational school that helps newly-qualified workers into the system. Medical care, in the a range of clinics, foreign-run hospitals and first-aid centres peace of mind to employees, residents and their families alike. facilities also abound, with recreation centres and sports s scattered across the area. Large green areas have also been ty since the start of construction. Dedicated green land is kept 2% as standard and total green space accounts for close to iving the park a natural atmosphere, despite the industrial of commerce here.

nternational companies interested in investing in the area, ement standards are frequently expressed as a priority. SIP s from its Singapore connection, drawing on high quality ds that the city state has brought to the region. The park's ment management team has a high Singaporean presence, ound a thousand of the park's trainee management have d training in Singaporean government departments. Learning he experiences of an economically-developed country has d that SIP has always been ahead of the competition when it to managing the growth of one of China's most exciting nent opportunities.

**na Suzhou Industrial Park Administration Committee**

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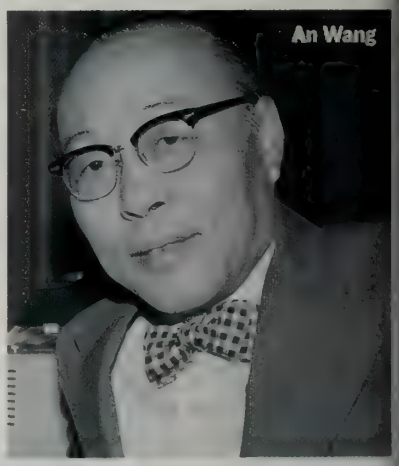
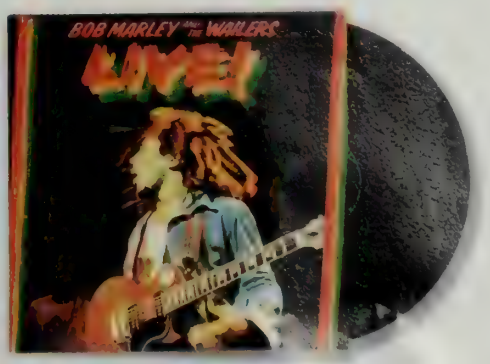
# 1947
## Tupperware

Earl Silas Tupper (1907-1983) honed his sales skills early, peddling his family's produce door-to-door at age 10. After working as an engineer at DuPont, he left to start Tupper Plastics Co. in 1938. Tupper developed a method for purifying black polyethylene slag into a tough, nongreasy plastic. Soon, Tupperware followed—plastic dishes, bowls and cups that can be sealed with airtight, waterproof lids. But his real innovation would come later: amassing an army of housewives to function as a multilevel sales organization. By the mid-1950s Tupperware parties were all the rage, and a new form of sales was born.

# 1949
## Magnetic Core Memory

While working at Harvard Computation Laboratory, Shanghai-born physicist An Wang (1920-1990) created the "pulse transfer controlling device," the first method of storing information on a computer without large magnetic drums. His real breakthrough came by using electricity to manipulate the polarity of thousands of tiny donut-shaped magnets made of ferrite. Modified by MIT scientist Jay Forrester, magnetic core memory became the basis for all high-speed computer memory, lasting until microchips displaced it. Wang sold his patent to IBM for $400,000 to concentrate on Wang Laboratories, which became the first to manufacture desktop digital calculators and minicomputers. Wang was a sizzling growth company but collapsed after Wang's death.


An Wang




# 1948
## LP

Peter Carl Goldmark (1906-1977) loved music. But the Budapest-born cellist and pianist hated the short playing time of his 78rpm records. By slowing down the speed to 33-1/3rpm and using vinyl instead of shellac to press the disc, Goldmark was able to add grooves and double the playing time. The LP, or long player, energized the music industry, allowing classical movements to be played in their entirety and eventually giving Iron Butterfly an excuse to record "In-A-Gadda-Da-Vida."

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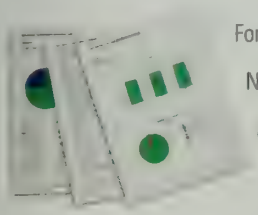

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## 1950
## Diners Club Card

Frank McNamara loved the interest he made lending money to small businesses. In 1950 he targeted consumers with Diners Card, the nation's first credit card. Today Americans maintain a collective balance of more than $700 billion in plastic debt.

## 1951
## The Pill

Drug companies weren't interested when Katherine McCormick and Margaret Sanger proposed a pill to prevent pregnancy. So the partners relied on McCormick's wealth (she was an heir to the International Harvester fortune) to fund a research team led by biologist Gregory Pincus. Pincus developed a progesterone pill that prevented ovulation. The FDA approved it in 1960; two years later 1.2 million women were on the pill, giving rise to Flower Power and the women's lib movement. Today the pill remains the preferred choice of birth control for 16 million American women.

## 1951
## Levittown

After World War II, William Jaird Levitt (1907-1994) signaled the explosion of middle-class suburbia with Levittown, a massive development on Long Island, N.Y.: 17,500 two-bedroom Cape Cod homes on seven square miles. He lured families out of the city with modern kitchens, televisions and affordable prices. (The first 800-square-foot houses sold for $7,000; no money down for veterans.) Levitt took advantage of assembly-line construction: one basic floor plan, prefabricated parts and crews that moved from house to house to perform specific tasks. Additional Levittowns—and sprawl created by little boxes on the hillside—were built in Pennsylvania, New Jersey and Florida.

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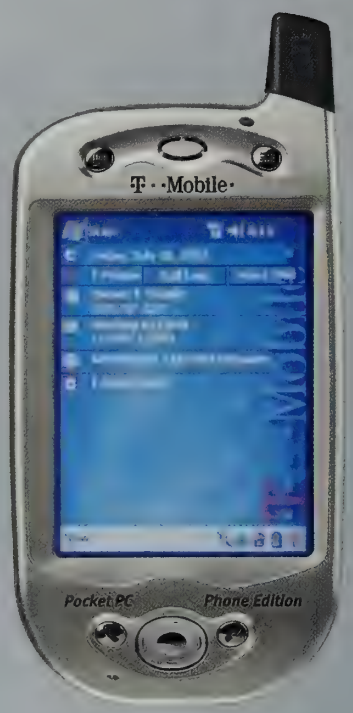


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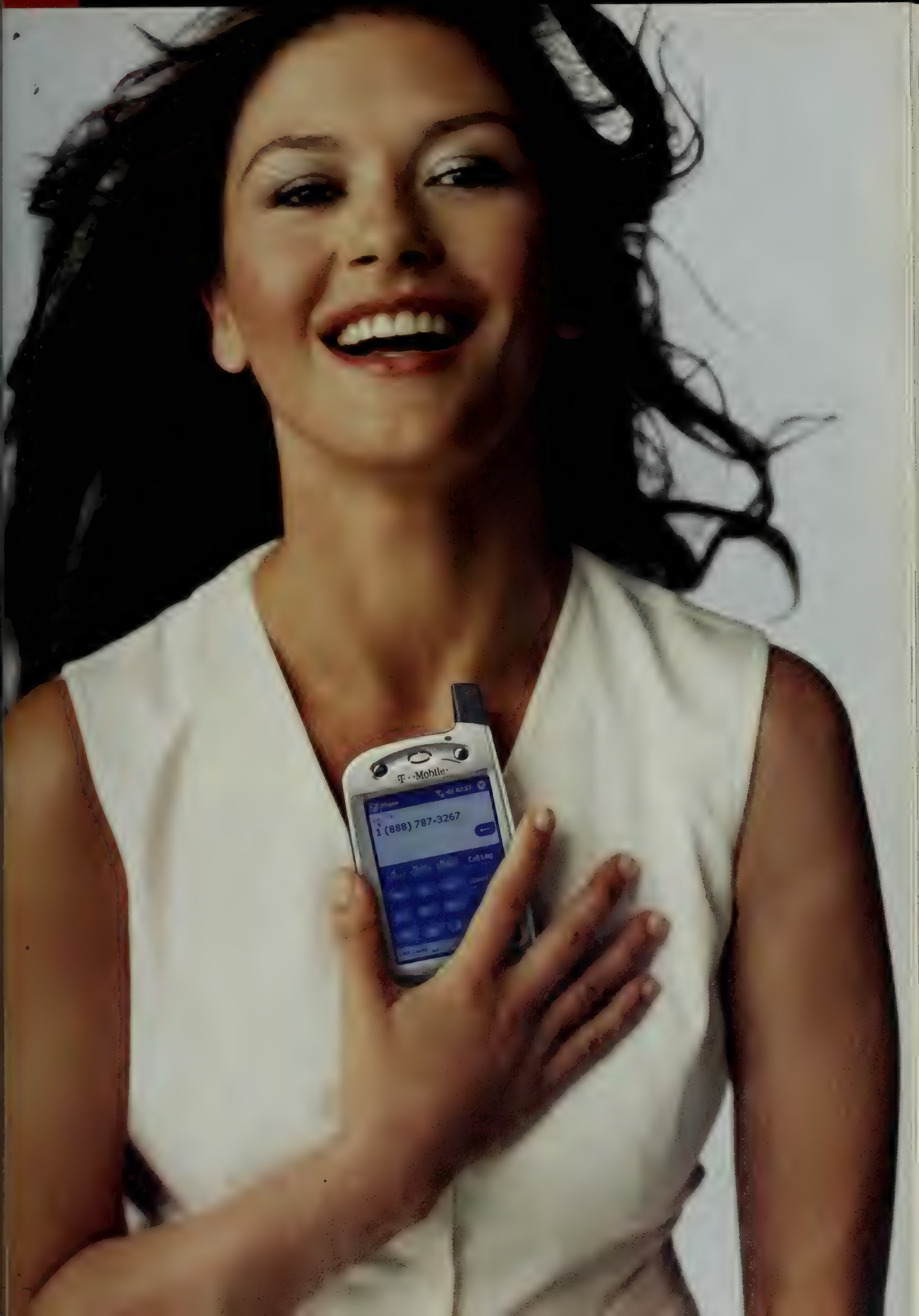
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Call Log

# 1952
## The Conglomerate

Seeking protection from the business cycles of the textile industry, Royal Little considered diversifying into nonrelated businesses in the 1920s. But it wasn't until the early 1950s that the ailing textile business made the idea a necessity. Little's Textron would go on to acquire 70 companies, including Bell Aircraft and golf cart maker E-Z-Go, becoming a template for modern conglomerates like GE, ITT and Tyco. The form survives, despite a crash in conglomerate stocks in the 1970s and the recent travails of Tyco.

Royal Little

# 1952
## Holiday Inn

Fed up with rundown motels he encountered on family road trips, Kemmons Wilson (b.1913) quit his job selling popcorn in cinemas to build the first Holiday Inn, named after the 1946 film starring Bing Crosby and Fred Astaire, in Memphis. He advertised single rooms for $4, doubles for $6, and later added TVs, air-conditioning and free ice. Expanding nationally on the backs of franchisees, Wilson's idea caught fire with the public; travelers always knew what to expect. Today Six Continents Hotels operates more than 1,000 Holiday Inns in 70 countries.

# 1952
## Thorazine

For years French surgeon Henri Laborit (1914-1995) searched for a way to reduce shock suffered after anesthesia. Solution: administering Thorazine before operations. Later he convinced a colleague's brother-in-law, a psychiatrist, to try it on his mentally ill patients. Result: Those who had barely moved in years made contact with people. The drug works to block the dopamine that causes schizophrenia and makes it possible for patients to function outside a mental hospital. The drug was FDA approved in 1952. Over the next few decades this and other drugs like it emptied thousands of beds in state insane asylums.

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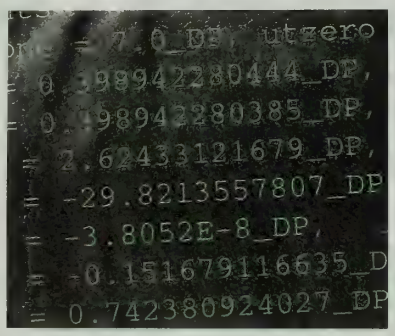
# 1954
## Fortran

John W. Backus (b.1924) led a group of IBM engineers who developed the first high-level computer programming language. Replacing the abstract gibberish of assembler language with the words of English and the familiar symbols of algebra, Fortran became a lingua franca in the physical sciences and served as the foundation for nearly every programming code since.



# 1955
## Fast Food

Though he had a nice business selling commercial milkshake machines, Ray Kroc (1902-1984) figured he'd make more money flipping burgers. In 1955 he opened his first McDonald's in Des Plaines, Ill. The Golden Arches changed the American landscape, doing to restaurants what Kemmons Wilson did to hotels: making them predictable. The franchise concept caught on, and Kroc went national with just a dollop of capital.

# 1954
## Polio Vaccine

In 1952 Jonas Salk (1914-1995) and Albert Sabin (1906-1993) raced to come up with a vaccine for poliomyelitis—a virus that causes inflammation of nerve cells in the spinal cord, which can cause paralysis, atrophy of the skeletal muscles and death. That year polio infected 52,000 Americans, some 3,000 of whom would later die of it. An influenza expert, Salk leveraged his relationship with D. Basil O'Connor, president of the National Foundation, to develop a dead-virus vaccine, an approach that left just enough of the virus to generate the antibodies needed to fight the disease. Salk tested his injected vaccine on himself and his family and announced his findings on CBS radio in March 1953. Vaccinations began a year later; paralytic polio cases fell from 13.9 per 100,000 in 1954 to 0.5 in 1961. Salk was celebrated as a hero and later worked on developing a vaccine for HIV.

Sabin was convinced that a live oral vaccine was the better answer. Field tests began in 1957. In June 1961 the American Medical Association swung its support to the Sabin vaccine. Between 1962 and 1964 more than 100 million Americans were inoculated on "Sabin Sundays," and by the mid-1960s his easy-to-administer vaccine—not Salk's—became the preferred one. The disease has been all but eradicated.

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Nothing floppy about the IBM 305 RAMAC, the first disk-drive.

## 1956
## Disk Drive

Using the first hard drive, the IBM 305 RAMAC (Random Access Method of Accounting and Control) system wouldn't exactly fit on a desktop. Developed by Reynold B. Johnson at IBM, the machine was made of 50 spinning 24-inch magnetic disks stacked on top of one another; a read/write mechanism floated between the disks, allowing for a far quicker way of accessing data than from huge reels of tape. The refrigerator-size machine blew 'em away at the 1958 World's Fair in Brussels, where it answered history questions in ten languages.

## 1956
## Containerized Shipping

Trucking magnate Malcolm McLean (1913-2001) tired of the slow speed of transporting cargo across country and overseas. Adapting a truck-trailer design to railcars and ship cargo holds allowed quick loading. The first containerized cargo ship set sail from New Jersey in 1956—spawning a new industry that set a precedent for the likes of FedEx.

## 1956
## Fiber Optics

Growing up in India, Narinder Kapany's teacher told him light only travels in a straight line. He took it as a personal challenge. In 1956, shortly after writing a paper on the subject, Kapany coined the term "fiber optics" to describe his bundle of flexible glass rods coated with a reflective material that could transmit an image from one end to the other with no distortion and minimal loss of light. Later, lasers were added to these "optical wave-guides," allowing digital information to be sent over fiber faster than copper wires, but it would take decades for high-speed fiber communications to take hold.

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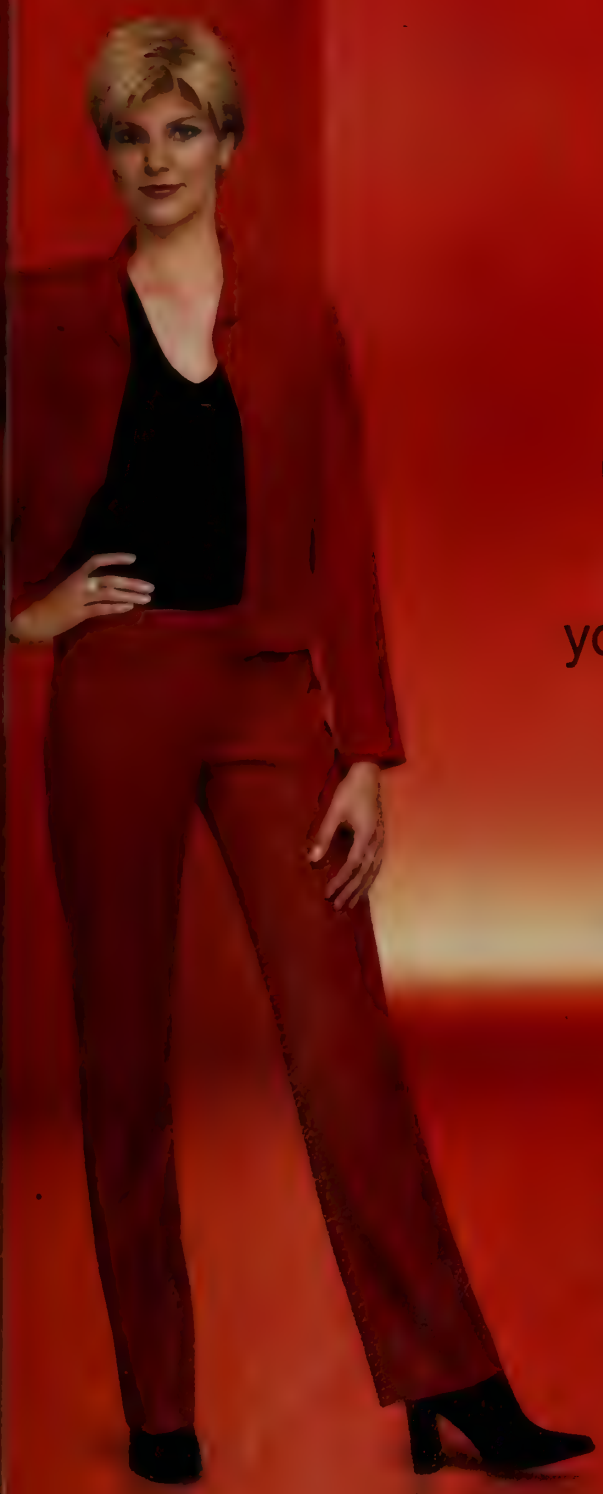

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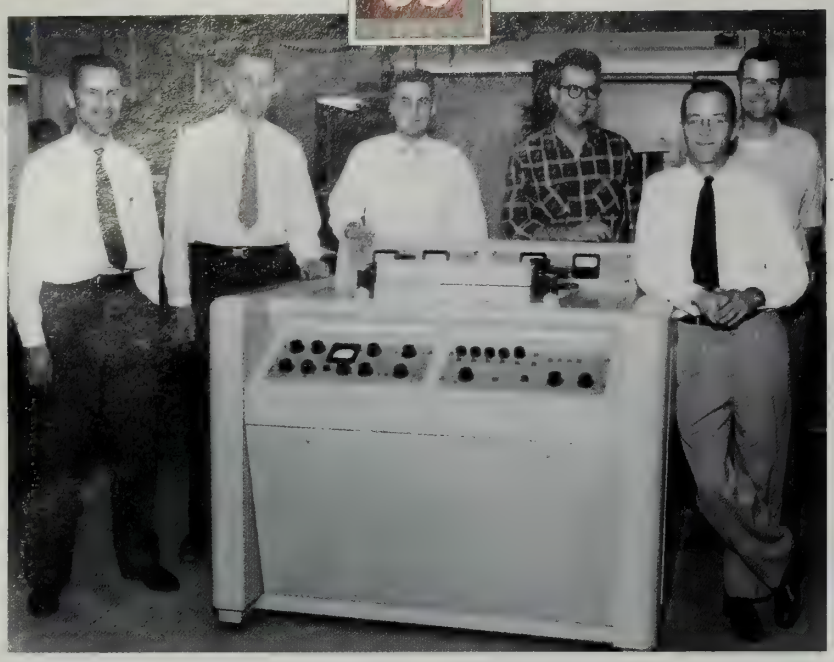

Picture this on top of your TV: the predecessor to the VCR.

# 1956
## Ampex VRX-1000

When Charles Paulson Ginsburg (1920-1992) started working at Ampex in 1952, videotape recorders operated at impractically high speeds; tape ran over stationary recording heads at 240 inches per second, necessitating huge quantities of tape. Ginsburg's machine, the Ampex VRX-1000 (later called the Mark IV), rotated recording heads at high speeds, allowing the machines to run tape at a much slower speed. CBS was the first to use the technology, broadcasting a delayed videotaped program. Tape-delayed, edited broadcasts became standard fare on television. Ginsburg's innovation would underpin future analog audio and videotape machines.

# 1958
## Implantable Pacemaker

Wilson Greatbatch (b. 1919) wasn't paying attention when he loaded the wrong resistor into equipment that monitored heart sounds. But he quickly noticed the device gave off a pulse that mimicked a heartbeat. After honing the design, he built 50 pacemakers in a barn out back of his house. Eventually it was tested in a dog and in humans. And the beat goes on.

# 1958
## Laser

Three people claim to have invented laser—light amplification by stimulated emission of radiation—but Gordon Gould wound up with the patent. The intense beams of light were first used for cutting and boring metals and other materials. In 1964 Kumar Patel of Bell Labs invented the dioxide laser, which ultimately permitted surgeons to perform highly intricate surgery using photons instead of scalpels.

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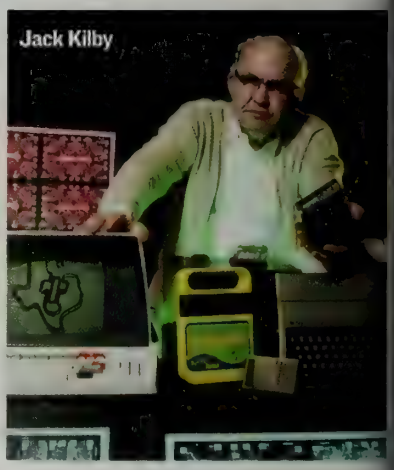
# 1959
## Three-Point Seat Belt

After working on pilot ejection seats for Saab Aircraft, Swedish engineer Nils Bohlin (1920-2002) moved on to Volvo as its head of safety engineering. There he realized that driver injuries could be reduced by using a seat belt that kept both the lower body and the upper torso in place; he introduced it 14 years before air bags. But just designing the device wasn't enough—Bohlin spent years calling on automakers and governments around the world to make his seat belt a standard. Today the U.S. Department of Transportation says the device saves 12,000 lives a year in this country.

# 1959
## Integrated Circuit

Two competitors share credit for the key innovation of the information age. Electrical engineers Robert Noyce (1927-1990) of Fairchild Corp., and Jack S. Kilby (b. 1923) of Texas Instruments, unaware of each other's work, figured out how to shrink the discrete components of a computer circuit board onto a sliver of silicon (Noyce) and germanium (Kilby). This dramatically increased a computer's power while reducing its cost. Their employers eventually agreed to share their patents, but Fairchild was the first to make its chips commercially available. The IC remains the building block of the electronic age.


Jack Kilby

# 1961
## Pampers

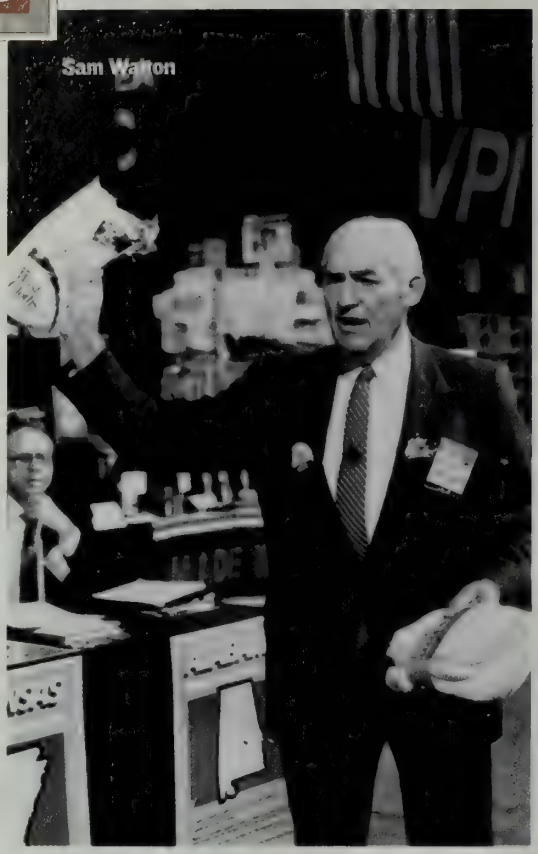
During a distinguished career at Procter & Gamble, Victor Mills (1896-1997) created tasty t[illegible] anut butter, Duncan Hines cake [illegible] les potato chips. But his biggest su[illegible] when he was charged with fin[illegible] Mills assigned a gr[illegible] come up with an absorbent [illegible] sable diaper that didn't leak. The en[illegible] birth to the $17 billion disposal [illegible] indust[illegible] Housewives had fewer loads of laund[illegible] do—and environmentalists h[illegible] new to cry about.

NOT THE USUAL.

FOUR SEASONS
*Hotels and Resorts*

# 1962
## Modem

Without it there's no Internet. Originally designed to help transfer data for North American air defense in the 1950s, the modulator-demodulator allowed computers to communicate by translating data into analog signals so they could be sent via phone line. AT&T's first commercial design, the Bell 103, came out 40 years ago and communicated at 300 bits per second. Today's typical cable modem works at about a million bits per second.

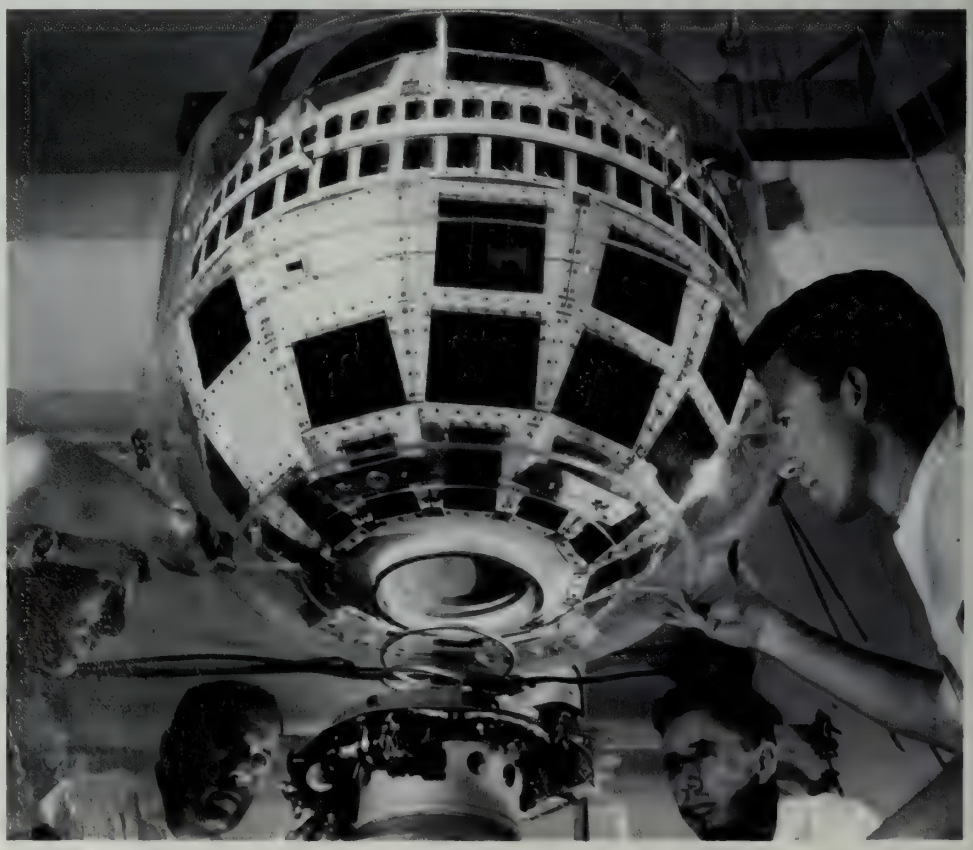



# 1962
## Point-of-Sales Data

Former J.C. Penney management trainee Sam Walton (1918-1992) opened his first Wal-Mart in Rogers, Ark. Four decades later the retailer has sales of $238 billion and 4,300 stores. He married a genius for efficient distribution and inventory with point-of-sales databases. In the mid-1980s Wal-Mart began sharing store-by-store sales info with vendors so they could tweak product lines—and let Wal-Mart leverage better prices from its biggest suppliers. If Walton were alive today, he'd be the richest man in the world.

# 1962
## Telstar I

It accounts for the fact you can call your cousin in Vilnius, Lithuania and she can watch the Super Bowl. The first commercial communications satellite was designed by Bell Labs' John R. Pierce (1910-2002), cost $3.5 million to launch and was used to broadcast television signals from Europe to the U.S. as well as transatlantic telephone calls. Pierce left Bell in 1971 to teach at Stanford and pen science fiction under the pen name J.J Coupling, though he rarely receives credit for his biggest contribution to the language: coining the word "transistor."



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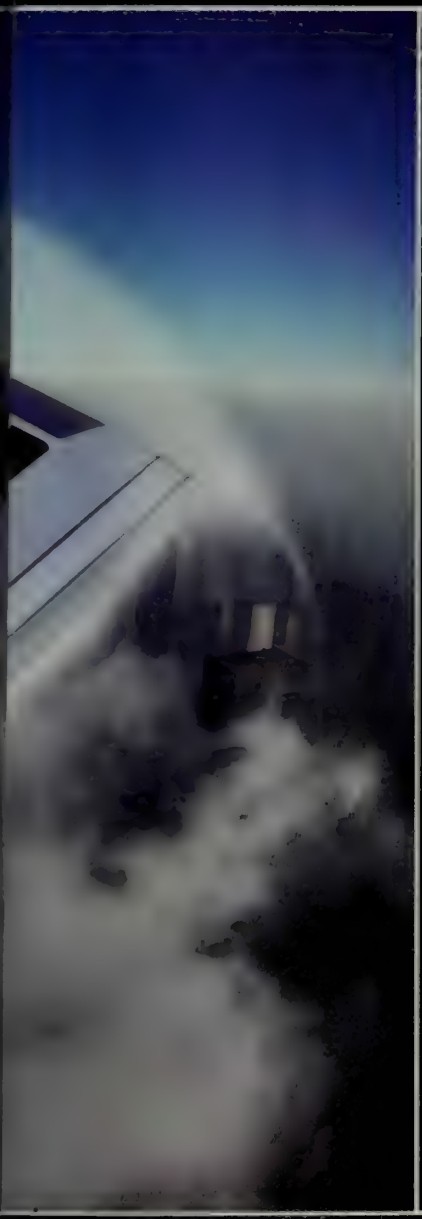


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# 1964
## Mainframe Family

IBM's System/360 product line was the first that consisted of a family of commercial computers using a common program language, so that customers moving up the scale in computer power could take their software with them. The creator of the 360 line, Gene M. Amdahl, left Big Blue to create a mainframe competitor in 1970. He later went on to found three additional computer companies.

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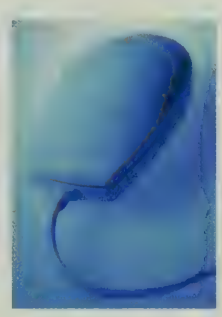
Ralph Nader

# 1965
## Consumerism

Long before he became a presidential election spoiler, Ralph Nader was America's chief corporate scold. His *Unsafe at Any Speed* targeted GM's Chevy Corvair. The book influenced Congress to pass the National Traffic and Motor Vehicle Safety Act in 1966. Perhaps more important, it provided a template for "activists" looking to target corporations for a variety of ills—real or perceived—and bolstered the market for plaintiff lawyers.

# 1968
## Mouse

To a packed house at a computer conference in San Francisco, Stanford Research Institute's Douglas Engelbart made a dramatic presentation that included first-time demonstrations of onscreen "windows," teleconferencing and a wooden stylus device he called a "mouse." Engelbart didn't see much value in the peripheral, and neither did Stanford Research, which owned the patent and later licensed it to companies like Apple Computer for a $45,000 one-time fee. Two decades later, Engelbart's invention was the PC standard.



IT'S A TAURUS.

Ford

TAURUS

the new 2003 Ford Taurus SEL. Surprised? Well, if you haven't looked at a Taurus lately, look again.

# 1969
## Charge-Coupled Device

It took Bell Labs researchers George Smith and Willard Boyle only an hour to sketch out the idea for a light-sensitive circuit that could record images. The end result, which lets machines store and transmit video without resorting to videotape, was first used in video cameras; by 1975 Bell produced a broadcast-quality camera. The devices have since been inserted into fax machines and telescopes.

What a sight: Boyle and Smith.

# 1969
## Automated Teller Machine

Bankers talked about automated cash dispensers for years, but Donald Wetzel, a former minor league baseball player and IBM salesman, gets credit for the first working model. The vice president of product planning at Docutel, then an automated baggage-handling equipment maker, installed the first ATM at a Long Island branch of Chemical Bank. The first machines were offline, but today some 1.1 million units are linked together across the globe. Wetzel left Docutel to start his own companies that sold banking equipment like vault doors.

# 1970
## Compact Disc

Physicist and audiophile James T. Russell (b. 1931) was desperate to improve the sound of his worn vinyl records. As a scientist at a Battelle Memorial Institute lab in Richland, Wash., he came up with the notion of digitizing the music and recording it with flashes of light on a photosensitive platter. A computer could then read the music without making physical contact—or creating wear and tear. The first CDs were the size of phonograph records, but Russell continued to develop the CD-ROM (read-only memory) technology, which is now ubiquitous not only for music discs but for DVDs and computer programs, as well. Last year 3 billion blank discs were sold.

# 1969
## The Internet

Who knew that the military-industrial complex would become the midwife for Web porn? Designed to let scientists working for the U.S. military communicate via computer, the Arpanet started small, connecting terminals at Stanford and UCLA. The National Science Foundation later took the technology and created a network that could handle greater traffic; it still helps support the Internet today. As it became less military and more commercial, the Arpanet morphed into the Internet.

# NASSAU COUNTY

## ne Nation's First Suburb — Open for Business

Nassau County means business. Aggressive efforts to bring new businesses to the nation's first suburb have been spearheaded by the newly elected county executive, Thomas R. Suozzi. "Nassau County is no longer just a bedroom community of New York City," says Suozzi. "With 1.3 million people in a county larger than 16 states, we are a thriving, exciting region actively seeking new businesses to locate here."

*Nassau County xecutive Thomas R. ozzi and Nobel prize cipient Dr. James D. on, who discovered DNA, discuss biotechnology and nomic development ssues at Cold Spring Harbor Laboratory, a nal genetic research er (Nassau County).*

Rich in history that dates back more than 350 years, Nassau County also earned the distinction of becoming the nation's first suburb. In 1947, William Levitt built "Levittown," an affordable housing development for returning World War II veterans in the heart of Nassau County. "Today Nassau County has its own economic engine," says Suozzi.

Nassau County has grown into a suburban center with incredible opportunities for businesses, both large and small. Right next door to New York City, its property values are rising faster than anywhere in the country, and it has one of the most educated workforces to be found. "We have a vision and a process for business development that is in harmony with the environment and supportive of the unparalleled quality of suburban life our residents enjoy," says Suozzi. "Nassau County is once again becoming a national model for suburban 'smart growth.'"

Nassau County is a colorful community with a rich history of achievement. Northrop Grumman is proud to be a part of that history. Together with many talented people, we've helped Americ win wars, put men on the moon, and assured the superiority of this nation's defense forces. After 72 years, we feel more connected than ever to this rare and special place.

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NORTHROP GRUMMAN DEFINING THE FUTURE

## m Past to Present, sau County Has ot to Boast About

au County's history is filled with the f that dreams are made of." Some of ountry's greatest industrial legends, made their fortunes just after the turn e century, called Nassau County their e. Tycoons such as J.P. Morgan, am Vanderbilt, F.W. Woolworth and el Guggenheim built their homes of ndor along Nassau County's north e, which was later to be coined "the Coast." The most lavish parties ever en about in the pages of American litre — galas described in F. Scott erald's *The Great Gatsby* — were red by the grand affairs held in the sions of Sands Point and Kings Point. the turn of the century, President dore Roosevelt chose Oyster Bay, on sau County's north shore, as the site s summer White House at Sagamore In 1927, Charles Lindbergh astoundhe world when he took off from sau County's Roosevelt Field runway e *Spirit of St. Louis*, making the first nonstop transatlantic flight to Paris.

sports, Nassau County lays claim to g hometown to one of the most sucsful professional sports franchises of 80s — the New York Islanders hockey . The team dominated the hockey e, winning a record four Stanley Cup mpionships during that decade. Now er new management, the team is n set for success.

day, Nassau County is still boasting. ost of the 2002 U.S. Open this past e at Bethpage State Park Golf Course, sau County drew more than 300,000 ctators for this world-famous event. It ently was announced that the Open ld return to Bethpage in 2009. Nassau nty is also the site of the third and st grueling leg of horse racing's Triple wn, the Belmont Stakes.

Bob Lipper, Island Metro Designs

*Sagamore Hill in Oyster Bay was the home of Theodore Roosevelt, 26th president of the U.S., from 1886 until his death in 1919. From 1902 to 1908, his Summer White House was the focus of international attention.*

## Innovation and Leadership — Central to the Spirit of Nassau County

The success of any municipality largely depends on its leadership. Tom Suozzi, elected at 39 years old to become Nassau County's youngest county executive, has brought a new energy and vision to his role. Suozzi, the former eight-year mayor of Glen Cove, is a CPA and lawyer, and he has a distinguished record of accomplishment on financial management, environmental protection and business development.

During his four terms as Glen Cove mayor from 1994-2001, Suozzi, a graduate of Boston College and Fordham Law School, used businesslike systems to successfully balance each city budget. He turned a multimillion-dollar deficit into a surplus and gave Glen Cove its highest bond rating since the 1970s — all without raising taxes for seven consecutive years.

A recognized environmentalist, Suozzi is the recipient of many awards for his efforts. In 1997, he was the only elected official to be awarded the U.S. Environmental Protection Agency Region 2 Environmental Award. In 1998, under his watch, Glen Cove was designated as one of 13 original U.S. communities to be a Brownfields Showcase Community, a national model for environmental and economic development.

Suozzi's work to revitalize the city's downtown earned statewide recognition, the New York Conference of Mayors' Main Street Award and its Labor Management Award.

As county executive, Suozzi already has presented a road map for economic development. He has consolidated every economic development tool and incentive under the direction of one person, Deputy County Executive Peter Sylver. The message is simple: *Nassau County is open for business.*

Nassau County has been home to more than its share of celebrities. Jerry Seinfeld, Ray Romano, Eddie Murphy and Billy Crystal are native sons. Entertainers Billy Joel and Alan King still live along the county's Gold Coast, and this past February, the entire country celebrated with Nassau County as one of its own, Sarah Hughes, enthralled the world with her breathtaking Olympic gold medal performance in Salt Lake City.

*Tiger Woods tees off at the 2002 U.S. Open at Bethpage State Park Golf Course in Nassau County.*

## A Strong, Diversified Economy

Under Suozzi's leadership, one of the main objectives of Nassau County's current administration is to foster a supportive environment in which high-tech and highly skilled industries can thrive. The dynamic environment of Nassau County applauds creativity, rewards achievement and welcomes diversity.

Long Island has long been associated with highly skilled industry. Beginning with the advent of World War II and through the early '90s, aerospace played the dominant role, led by Grumman Aircraft Engineering. Today Northrop-Grumman no longer focuses on manufacturing on Long Island, but its defense software and engineering division employs 2,000 people, and the company has expansion plans to bring that number up to 3,500. The military spends $6 billion annually on defense contracts in Nassau County.

Nassau County is fortunate to have so many resources at its disposal, and it is well positioned to take advantage of both emerging and growing industries. In recent years, companies such as Cablevision, Par Corporation, KeySpan, Weight Watchers International, 1-800-FLOWERS, Comverse Technology, OSI Pharmaceuticals, Canon USA and Cold Spring Harbor Laboratory have been at the forefront of their respective industries. Cold Spring Harbor Laboratory is internationally recognized for excellence in research and educational activities on genetics, cancer, the human brain and bioinformatics. Companies like these have been

### Nassau County's Six High-Tech Targets

There are six categories of high-tech and highly skilled industries that currently have a strong base in Nassau County and that the Suozzi administration is encouraging to expand:

1) biotechnology (pharmaceuticals and research laboratories)
2) software development (general and specialized software)
3) high-tech firms (telecommunications, equipment providers)
4) highly skilled professionals and service providers (law firms, accounting firms)
5) banking/finance (commercial banks and financial services firms)
6) health care (hospitals and home health agencies).


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# orth Shore - Long Island Jewish Health System

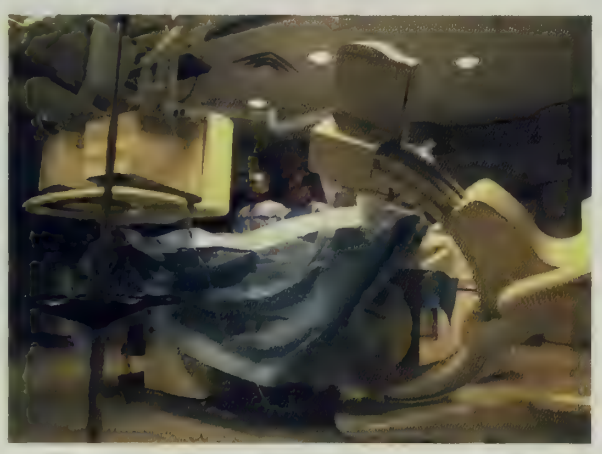
## etting New Standards in Healthcare

*Michael J. Dowling, President & CEO, North Shore-LIJ Health System*

### t All Hospitals Are Created Equal

orth Shore University Hospital in Manhasset, N.Y., was rated e No. 1 metropolitan-area hospital in a survey published ear- r this year in AARP's *Modern aturity* magazine.

- e North Shore-Long Island ewish (LIJ) Health System is e No. 1 employer in Nassau ounty.
- orth Shore University Hospital nd LIJ Medical Center in New yde Park, N.Y., are the only two ospitals in New York to be rec- gnized for nursing excellence.
- orth Shore University Hospital s routinely recognized by *U.S. ews & World Report* as having ne of the nation's best cardiol- gy programs.
- chneider Children's Hospital, n the campus of LIJ, was amed this year as the best chil- dren's hospital in New York by *Child* magazine.
- The North Shore-LIJ Research Institute, ranked among the top 25 eneficiaries of grants from the National Institutes of Health, is world-renowned for its disease-oriented research.



*The latest in flat-panel digital imaging technology provides physicians at Long Island Jewish Medical Center and North Shore University Hospital with X-ray images of the heart, which provide a road map for treating blockages in the arteries.*

### orth Shore-LIJ Health ystem — An Employer of Choice

Nassau County's No 1 employer, North Shore-LIJ is committed to workforce. To offer opportunities for personal and professional owth among its 32,000 employees, North Shore-LIJ established a orporate university" known as the Center for Learning and Innova- n — the largest of its kind in the healthcare industry. To launch this arning initiative, the health system joined forces with GE Medical ystems and Harvard University School of Public Health — two orga- zations that provide the best of the corporate sector and academia. "An investment in our employees leads to better patient care," ys Michael Dowling, president and CEO of the North Shore-LIJ ealth System, which includes 18 hospitals on Long Island, ueens and Staten Island — the largest integrated healthcare net- ork in the Northeast.

### A Commitment to Nursing

It's no coincidence that while the nationwide nursing vacancy ranges from 10% to 12%, only 5% to 6% of nursing jobs are unfilled at North Shore-LIJ.

Results speak for themselves. LIJ and North Shore University Hospital are the only two hospitals in New York to earn the prestigious honor of Magnet Recognition for Excellence in Nursing Service. Magnet recognition, comparable to the Olympic gold medal, is the highest honor in the nursing profession.

### North Shore-LIJ Is Rated Tops in Cardiac!

North Shore-LIJ has a well-deserved reputation in heart surgery. A recent state report showed that LIJ had the best rate of successful coronary artery bypass surgeries in the New York metropolitan area. And North Shore University Hospital's cardiac program, already recognized as one of the nation's best, got even stronger this year with the addition of Dr. Alan R. Hartman, ranked as the New York metropolitan area's top cardiac surgeon.

### Innovative Research

The North Shore-LIJ Health System has internationally recognized researchers who translate laboratory discoveries into practical and effective treatments for patients in such areas as oncology and cell biology, genomics and human genetics, neuroscience, immunology and inflammation, and psychiatry.

### Paving the Way for the Future

The North Shore-LIJ Health System continues to build for the future. Over the next few years, the health system will be investing well over $600 million in extensive modernization and expansion projects, including upgrades to its high-quality community hospitals in Glen Cove, Plainview, Syosset and Valley Stream, N.Y. As Dowling says, "The goal is to ensure that North Shore-LIJ provides its patients with the most advanced, comprehensive and innovative medical care available in the region."

**For more information, visit www.northshorelij.com.**

## Cold Spring Harbor Laboratory

Established in 1890, Cold Spring Harbor Laboratory is a private, nonprofit basic research and educational institution. Under the leadership of Dr. Bruce Stillman, some 260 scientists conduct groundbreaking research in cancer, neurobiology, plant genetics and bioinformatics. The laboratory is recognized internationally for its educational activities, which include an extensive program of scientific meetings and courses and its Ph.D.-granting Watson School of Biological Sciences. For more information, visit www.cshl.edu or call 516-367-8486.

CSH

*Robert B. Catell*
*Chairman & CEO*
*KeySpan*

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KeySpan, energizing Nassau.

KEYSPAN Foundation

able to successfully lure talent from Manhattan and other cities to Nassau County. It is this talent pool that continues to support industry, housing and sales in the county. Corporate giants, as well as smaller family-owned businesses, have been attracted to Nassau County for all that it has to offer.

A network of government agencies and services has taken a proactive role in supporting economic business development. The county's Industrial Development Agency (IDA) is one such agency. The IDA has provided long-term business solutions to a wide range of companies and has helped hundreds of companies finance building, expansion, renovations, relocation and capital equipment projects through the issuance of industrial revenue bonds at lower interest rates than conventional financing. The IDA also helps companies take advantage of special tax incentives to further lower the cost of doing business.

*Argentine sail training vessel* Libertad *docks in Hempstead Harbor on the coast of Glen Cove's Morgan Park for the America's Sail '98.*

### Location, Location, Location

Nassau County couldn't be better po

### An Ideal Climate for Thriving Businesses

- Of the 20 largest metropolitan areas in the U.S., Long Island ranks No. 1 in retail sales.
- Despite the stock market's volatility, the median closing price on houses in Nassau County was $330,000 in June 2002, up 21% from June 2001.
- The average annual income in Nassau County is $73,000.
- Nassau County has the No. 1 percentage of households in the nation with income of more than $150,000.
- Nassau County is home to 40 companies with annual revenues of more than $100 million.
- Diversity of home prices in Nassau County accommodates every need, from top executives to entry-level employees.
- Eight four-year colleges and universities in Nassau County, along with the best public schools in the nation, have provided Nassau County with an exceptionally well-educated workforce.

d — just a stone's throw from Man-
an (30 minutes to midtown) or the
hate resort of the Hamptons —
au County offers the convenience of
e proximity to the most exciting city in
world, with the open space and seren-
f the suburbs. The county's trans-
tion network, the most extensive and
se in the nation, makes life simpler for
sidents, with easy access to railroads,
nd truck roadways, buses, airports
even ferries. Government invest-
ts in the county's various modes of
sportation have resulted in reduced
l times, increased safety and cleaner
he Long Island Railroad, the nation's
est commuter railroad system, has
e than 735 daily trains and easy con-
ions to New York City and its sub-
s. The county also enjoys close prox-
y to four airports for domestic and
national flights as well as corporate
tion. A county on the move needs
t transportation, and Nassau County
ides it.

## Wealth of Lifestyle Opportunities

idents of Nassau County take pride in
enviable quality of life. One of the recur-
themes in Nassau County is "Choice,"
erything from housing and shopping to
ural and recreational alternatives.

In Nassau County, homes range from attractively priced rental apartments and condominium town houses, to extraordinary executive estates with matching prices. Living in Nassau County has proved to be a smart investment, as the county ranks in the top 1% nationally in home price appreciation. Neighborhoods vary to meet the diverse needs of individuals, couples and families. Within Nassau County, there are New England-style hamlets and waterfront villages, communities of small Cape Cods and streets lined with larger Victorian homes, classic housing developments and new luxury gated communities with every amenity, modest split-levels and

### More to Boast About

Surveys consistently rate Nassau County among the top 10 places to ive in America. Nassau County:

- Has been rated the fifth-healthiest place in the world
- Has the lowest crime rate of any community of more than 1 million people in the U.S.
- Has the lowest crime rate in New York State
- Is ranked 10th in the U.S. among the wealthiest metropolitan areas.

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*Jones Beach, a 2,413-acre state park, is popular for sand and surf, as well as othe sports and entertainment programs.*

Gold Coast estates.

From any neighborhood, there are nearby shopping opportunities offering a range of options, from malls and upscale boutiques to prestigious national retailers and local mom-and-pop stores. For even the most sophisticated shoppers, there's no need to go to Manhattan. Americana Manhasset, the most upscale shopping center on Nassau County's north shore, boasts a collection of internationally renowned shops to rival those on Madison Avenue or Rodeo Drive, including Salvatore Ferragamo, Hermes, Giorgio Armani, Tiffany, Hirshleifer's and its newest restaurant, Payard.

Culture and recreation are also priorities in Nassau County, with countless opportunities to recharge, relax and renew body, mind and soul. As a county rounded by water, Nassau has miles pristine beaches along Long Island So and the Atlantic Ocean, including wo famous Jones Beach. More than 4, acres of parks and preserves are ope the public for hiking, biking, bird-watch or simple relaxation. The county also tures more than 50 private and 11 pu golf courses, including Bethpage, the public golf course to host the U.S. Op numerous boat-launching ramps marinas; and the Nassau Coliseur Expo, with a 16,000-seat arena 60,000-square-foot exposition and ference center. In recent years, Nas County has evolved into a subur

## Business Support: An Important Theme in Nassau County

- More than $1.5 billion in Nassau County IDA financing has been delivered since 1979.
- The Nassau County IDA has created or retained more than 68,000 jobs.
- During its first three years of operation, the county's award-winning Operation Downtown pumped more than $5 million into local communities to help improve and revitalize "main street" shopping areas.

## Long Island Power Authority (LIPA)

LIPA, Long Island's electric company, supports the economic growth of Long Island by developing business solutions and offering incentives to attract new business while keeping existing businesses moving forward. Our programs help companies increase profitability through efficient energy management. We offer rate incentives for relocation and Empire Zone projects, cash incentives/rebates on energy-efficient technologies, building design and engineering support and help in obtaining economic development funds. For more information, call LIPA at 1-800-528-2005 or visit our Web site at lipower.org/ecodev.Nassau.

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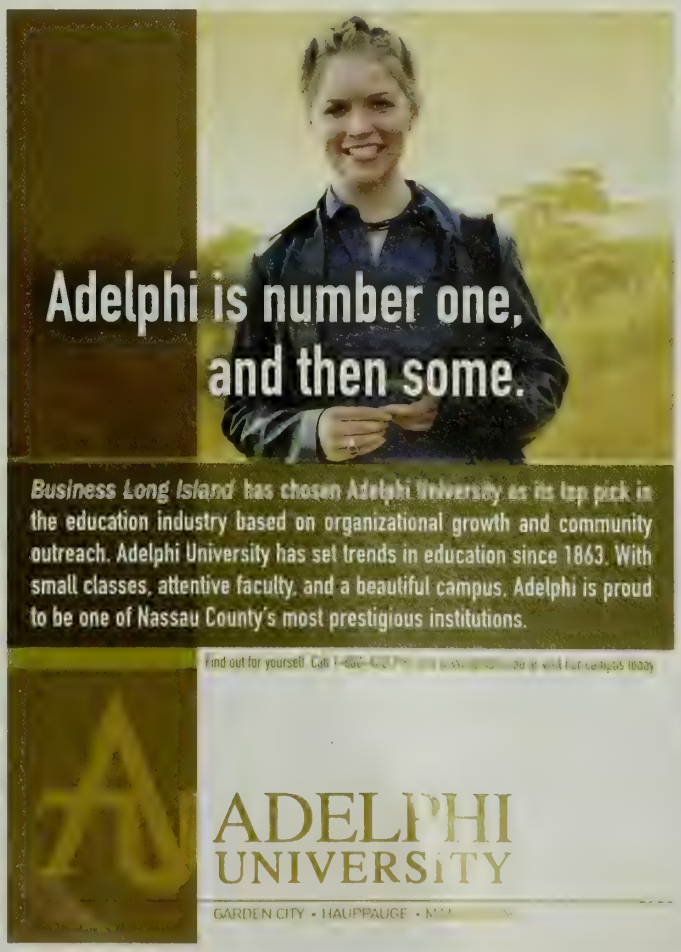
### Nassau County: Home to Top Schools

- In a nationwide survey of top public high schools, two Nassau County schools ranked among the top 10 (Jericho, No. 2; Manhasset, No. 7), based on the number of students taking college-level advanced placement courses. Among the top 230 schools, 18 were in Nassau County.
- Nassau County students received 61 prestigious 2002 Intel Science Awards from among 300 presented nationwide.
- In the 2002 Siemens-Westinghouse Competition in math, science and technology, 35 Nassau County students were semifinalists, more than from any other county in the U.S.
- Four out of five Nassau County high school graduates pursue higher education, one of the highest rates nationally.

cultural center. Its 2,200-seat Tilles Center for the Performing Arts attracts world-renowned artists in music, dance and theater and is home to the Long Island Philharmonic. Celebrated pop entertainers also appear year-round at Westbury Music Fair and seasonally at the outdoor Jones Beach Amphitheater.

There is no shortage of historic sites and attractions. A taste of colonial days can be experienced at the Old Bethpage Village Restoration, a working 19th-century farm community. History also comes alive at Sagamore Hill, Teddy Roosevelt's summer White House that is now a museum, and at the newly reopened Cradle of Aviation Museum. History continues to be made in Nassau County. Under the direction of Dr. James Watson, winner of the Nobel prize for the discovery of DNA, research programs at world-famous Cold Spring Harbor L ratory lead the way in groundbrea cancer research.

For visitors to Nassau County, there numerous places to stay, including county's premier hotel, the Garden Hotel. Located in the heart of Nassau Co it offers its guests a world-class ex ence. Alexander Turney Stewart built hotel in 1874. He bought 7,000 acre Long Island and developed the comm ty of Garden City. The Garden City H destroyed by fire in 1895, has been re and renovated several times. Featuring luxury guest rooms, 16 meeting rooms two new restaurants, the hotel comb Old World charm with high-tech busi services for its guests. Past visitors included Charles Lindbergh on the r before his world-famous flight, John Jackie Kennedy and Prime Minister Mar Thatcher. More recently, Michael Jack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y Clinton and Sarah Ferguson (the former Duchess of York) have en the Garden City Hotel during their Long Island stays.

## ellent Health Care: ign of a County That Cares

assau County, caring and innovation converge at some of world's finest community and teaching hospitals, public th facilities, centers for biomedical research, nursing homes, ice and home care services. Patients, doctors and scientists

### lassau County's Six Priorities or Economic Development

s part of his mission for Nassau County, County Executive uozzi has set six priorities for economic development:

- Attraction of highly skilled, high-tech industries
- The cleanup and reuse of abandoned environmentally impaired properties for beneficial and productive use (brownfields redevelopment)
- Downtown revitalization
- Expansion of the workforce and senior housing
- Preservation of open space
- Sports, entertainment and tourism.


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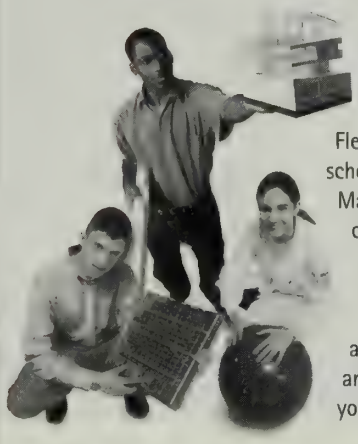

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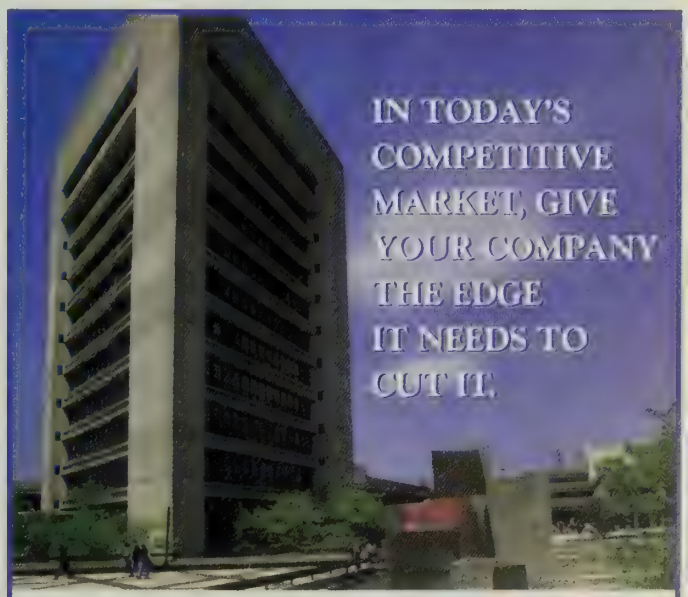


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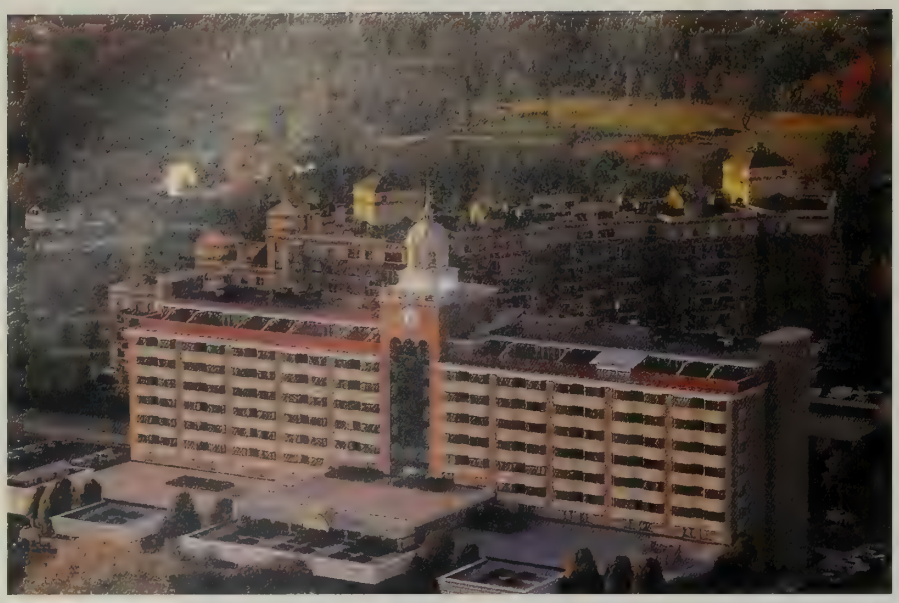

*The Garden City Hotel is a world-class facility offering outstanding service, distinctive accommodations and easy proximity to New York City.*

come to Nassau County institutions from all over the world to gain the benefits of the experience, state-of-the-art technology and diagnostic experts available.

Nassau County has more than a dozen hospitals, including the North Shore University Medical Center, rated the best health care institution in the country in AARP's *Modern Maturity* magazine. Nassau is also home to New York's only specialty-designated cardiovascular center and several level 1 regional trauma centers.

## Education: The Key to Success

Excellence in education is a dominant theme in Nassau County. Commitment to education begins with the earliest educational experiences in the county's 56 independently run public school districts, right through to the county's institutions of higher education. Throughout all the diverse communities of Nassau County, a co tinuing commitment to excellence education prepares students to becom part of the best-educated workforce America.

In recent years, more Long Islan employers have worked with loc school districts to bridge the g between the classroom and the wor place, giving students a broader vie and understanding of career optio Today most of Nassau County's pub school districts have business advisc boards. This partnership continu between the business communi and Nassau County's higher educati institutions.

Nassau County is home to eig four-year colleges and universities degree-granting technical institute a Nassau Community College, the large two-year college in New York State addition, the U.S. Merchant Mari

### A County for Growth and Opportunity

Nassau County, in creating a dynamic environment in a suburban metropolis, has positioned itself as the ideal location for both businesses and families to thrive and grow. To attract new businesses, Nassau County continues to help companies and nonprofit organizations. Financial incentives include:

- Low-cost bond financing for almost any commercial enterprise
- Property tax abatements for high-tech, highly skilled businesses
- Sales-tax exemptions on materials purchased
- Commercial revitalization loans for economic development projects
- Reduced energy rates for high-tech, highly skilled, environmentally friendly companies
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## arden City

ccording to Tom Suozzi, "Downtowns e where communities are built. They are ur county's lifeblood." The quintessential uccess story is Garden City, a commu- ty that has become a model for com- unity improvement projects, neigh- orhood energy and commitment to vitalization efforts. Once known as the fth Avenue of Long Island, Garden City as recently experienced a renaissance, anks to beautification projects, mar- eting and the revitalization effort, spear- eaded by the Albanese Development orporation and Castagna Realty Co. c., which has turned Franklin Avenue to a "mini Wall Street" financial ser- ices center. With Saks Fifth Avenue nd Lord & Taylor as anchors, revitaliza- on efforts also have lured new retailers. ommitment and vision have yielded a vell-planned community that is once gain blooming.

Academy and Webb Institute of Naval Architecture are located in Nassau County, as well as three different branches of the State University of New York system. Proximity to Manhattan's cultural enrichment, along with the attraction of an educational campus set in the suburbs, provides a unique educational asset to these students.

The county's unique environment combines abundant resources, open-ended business opportunities, a wealth of lifestyle options and leisure at its best. With its close proximity to New York City, along with an excellent infrastructure, education system and health care facilities, Nassau County has unparalleled advantages. Nassau County has always been a great place to live, but today America's first suburb is a model of growth and opportunity for the future. ■

### Nassau County's Forbes 500s Companies

Cablevision NY Group
New York Community Bancorp
Roslyn Bancorp
Weight Watchers International

### For more information on Nassau County, contact:

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Nassau County Executive
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Mineola, N.Y. 11501
Phone: 516-571-3131
Fax: 516-571-3136
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Web: www.nassaucountynydevelopment.org and www.co.nassau.ny.us

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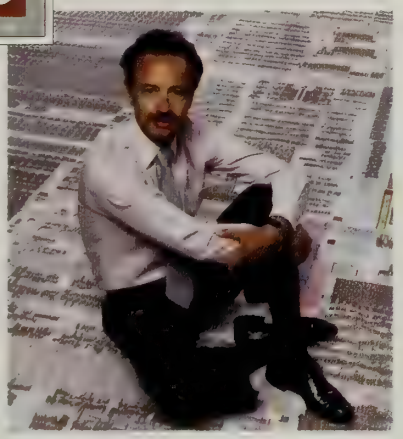
# 1970
## Relational Database

Oxford-trained mathematician Edgar F. (Ted) Codd developed the concept of the relational database while working as an IBM researcher in 1970. Earlier computer databases had fields of data arranged in a rigid way; Codd's notion was that disparate data sets could be combined by linking fields they have in common (say, a customer number). Codd clashed with his bosses at IBM, who were pushing a more primitive system. But the relational database is now standard—and the basis for Larry Ellison's Oracle fortune.

Larry Ellison


Andrew Grove

# 1971
## Microprocessor

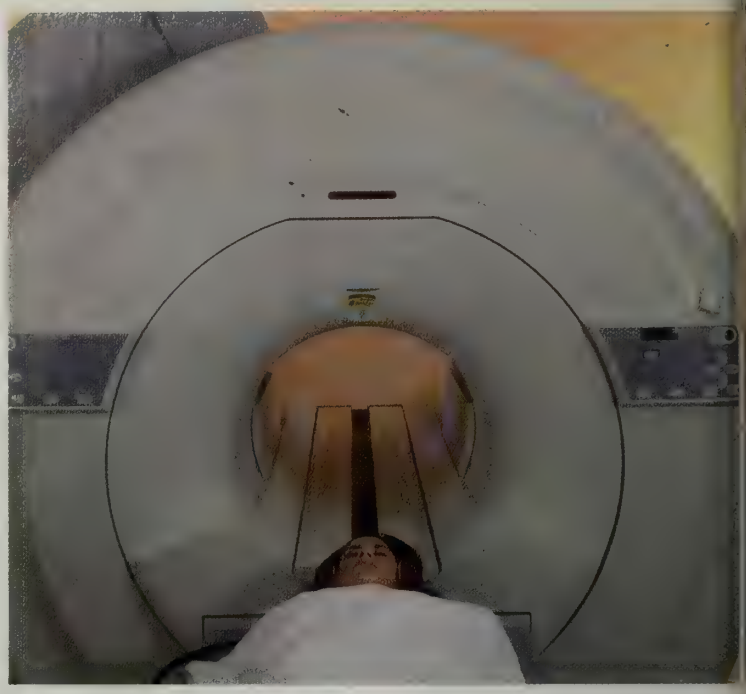
After helping to develop the integrated circuit at Fairchild, Robert Noyce (*see p. 172*) went on to cofound chipmaker Intel. There a team led by Marcian (Ted) Hoff (b. 1937) took the next step in miniaturizing computers by putting an entire central processing unit on one chip. The original, designed for Japanese calculator company Busicom, could perform 60,000 operations per second, the same processing power as the 30-ton Eniac computer built two decades earlier. Give Intel credit for designing the chip and having the foresight to buy the rights (for everything but the calculator chips) back for $60,000.

# 1971
## Answering Machine

Valdemar Poulsen patented the ancestor of the answering machine—the Telegraphone, which used a telephone, some steel wire and an electromagnet—in the 1890s, but it took another seven decades for a commercially viable version to hit the market. PhoneMate's Model 400 weighed 10 pounds and held 20 messages on reel-to-reel tape. Lighter and cheaper, the PhoneMate's descendants are found in 67% of American homes.

# 1972
## Computed Tomography Imaging

For more than seven decades X rays allowed doctors to peer inside the body, but just enough to see the skeleton. Working separately, Godfrey Hounsfield and Allan Cormack each developed a method of replacing X-ray film with crystals, rotating a camera around the body and using a computer to collate multiple images. The result: detailed pictures of internal slices of the body, which made many diagnostic surgeries unnecessary. Soon after, chemistry professor Paul Lauterbur wrote an article suggesting that nuclear magnetic resonance could be used to create images, leading to the development of magnetic resonance imaging (MRI), which created even more detailed 3-D images of internal organs.



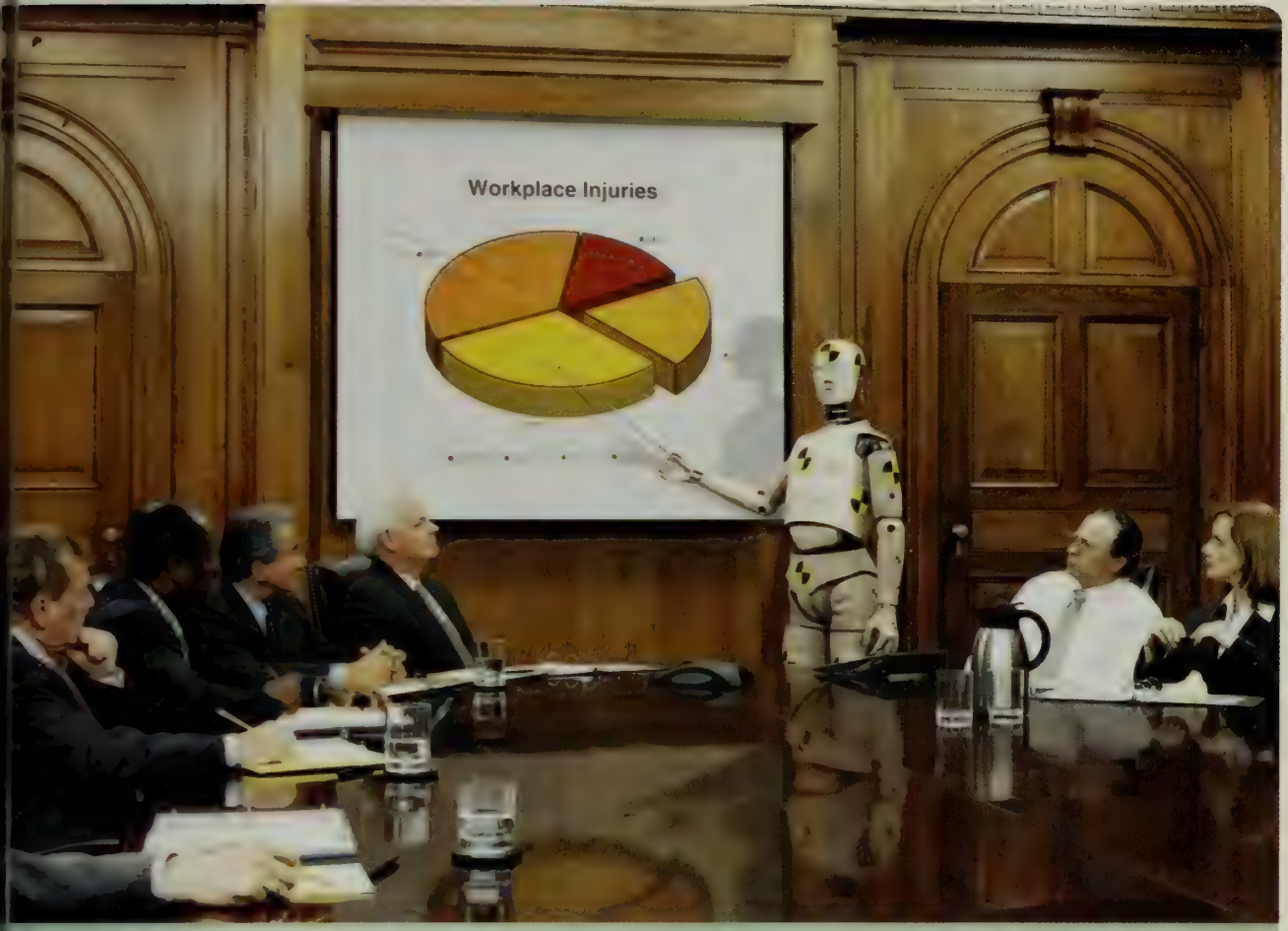
Dennis Ritchie and Kenneth Thompson

# 1972
## UNIX/C Programming

The original computer operating system and language, it is still used throughout the world. Bell Labs researchers Dennis Ritchie (b. 1941) and Kenneth Thompson (b. 1943) created a system based on simple, discrete commands that worked on multiple machines and supported many users; one person could try out Spellcheck, while another created a document. C programming paved the way for thousands of applications. Today UNIX is still used to run most Internet servers and large business systems.

# 1972
## Ethernet

While at Xerox's Palo Alto Research Center, Robert Metcalfe was charged with hooking up all the scientists' computers into a single, fast network. He coined the term Ethernet to describe the system of wires and microchips that allow computers linked locally to talk to one another without drowning each other out. But his real achievement was getting Xerox to share the technology with Digital Equipment Corp. and Intel, making Ethernet an industry standard—it's now the most widely used technology for local area networks—and then founding 3Com in 1979 to sell the technology.

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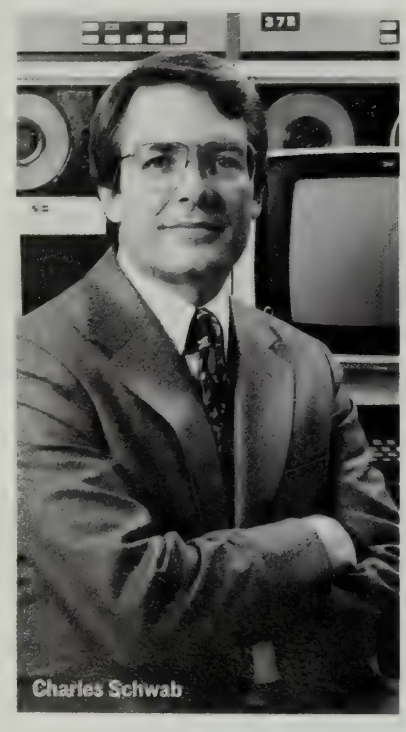
# 1972
## E-Entertainment

Nolan Bushnell (b. 1943) gave geeks another reason to stay indoors by introducing Pong, a crude electronic tennis game, which was later miniaturized for the home. Bushnell's Atari dominated the videogame market, but he eventually sold out and started the Chuck E. Cheese's pizza parlor chain. The game brand he created is more visible today on hipster T shirts than on TV screens. But the industry he started, now dominated by Sony and Microsoft, generates more money in the U.S. than the movie business gets at the box office.

Game on: Pong


Charles Schwab

# 1973
## Discount Brokerage

It's unlikely taxi drivers would have turned into day traders had it not been for Charles Schwab (b.1937). He positioned his company as the anti-Wall Street firm, dumping all the trappings of a typical brokerage house—the commissions, front-end loads, markups and fees—in exchange for simple, low-priced, per-trade fees. Today his San Francisco-based outfit serves 8 million investors who control $800 billion in assets.

# 1974
## Catalytic Converter

America's long love affair with cars produced one unwanted offspring: smog. After Congress passed the Clean Air Act of 1970, Corning scientists Rodney Bagley, Irwin Lachman and Ronald Lewis raced to come up with a product that would help automakers comply with the emissions guidelines. The ceramic honeycomb the trio created is part of a car's exhaust system, where it converts 95% of pollutants into water vapor and carbon dioxide.

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## 1976
# Index Fund

Though there is debate over who first came up with the idea of the index fund—Harry M. Markowitz (b. 1927) won a Nobel Prize for work that touched on the concept—John C. Bogle (b. 1929) gets credit for bringing it to the masses through his First Index Investment Trust. Now known as the Vanguard 500, the idea was to keep the fund simple and cheap by mimicking a basket of stocks made up of the 500 largest companies. The idea was slow to catch on—in its first year it reportedly raised $11 million—but eventually had a huge impact on money management. Bogle's firm went on to become the second-largest mutual fund manager, with assets of $560 billion. And he now has plenty of company—today there is $340 billion invested in pure equity index funds.

John Bogle

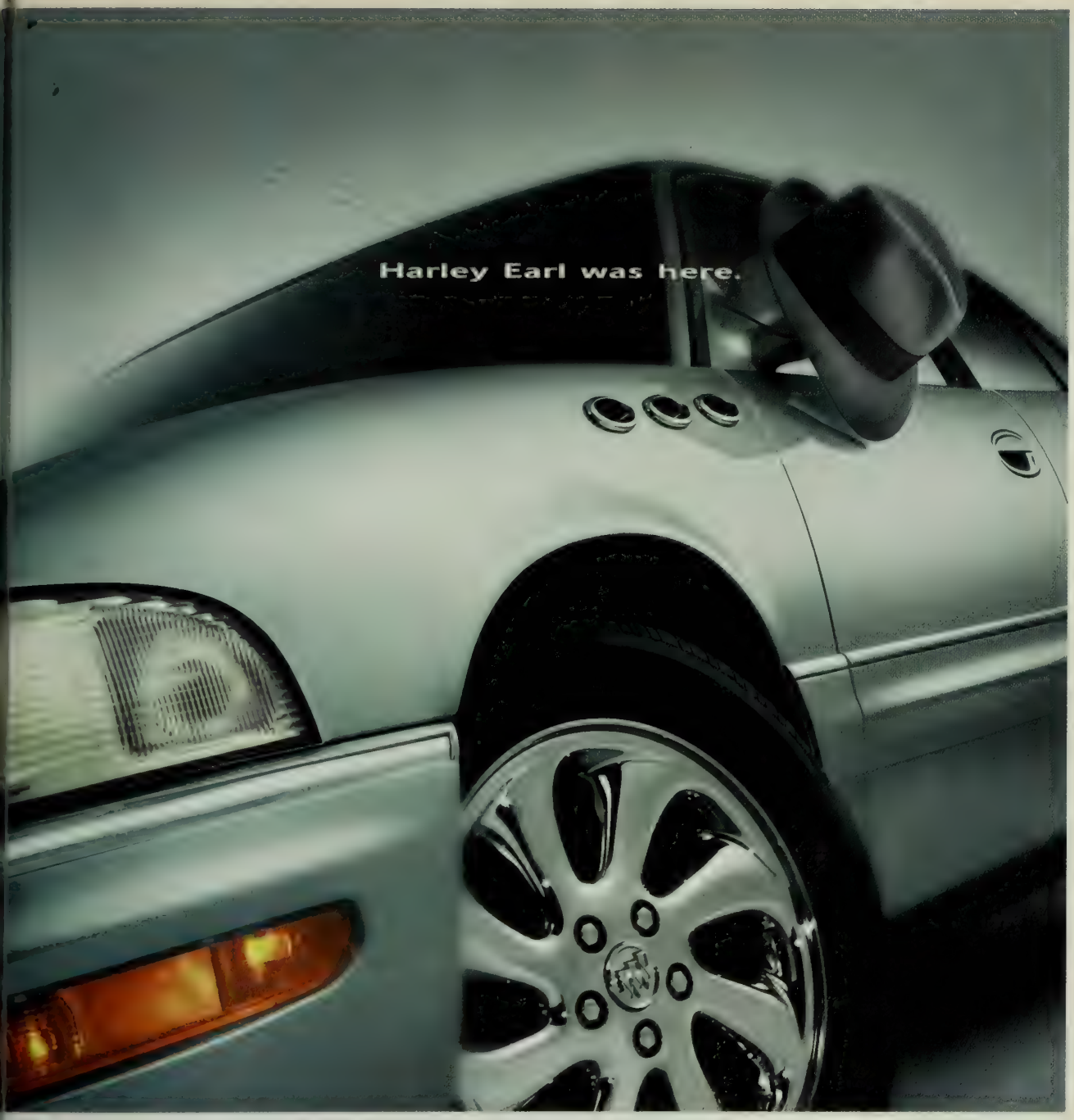
Steven Jobs

## 1976
# Personal Computer Chic

Apple cofounders Steven P. Jobs (b. 1955) and Stephen Wozniak (b. 1950) helped usher in the era of the PC by making their machines accessible and cool—as desirable, in their way, as sports cars. But because Apple never made a serious stab at the business market, it has always been a shrimp compared with larger outfits. Those same competitors, though, were always ready to adopt Apple's innovations in user-friendly design and clever marketing. Wozniak retired in 1985; Jobs was forced out of the company in 1985, but returned in 1997 to lead Apple's latest incarnations.

## 1976
# Recombinant DNA

Robert Swanson, then a 29-year-old venture capitalist, teamed up with University of California, San Francisco professor Herbert Boyer to commercialize Boyer's breakthroughs in "recombinant DNA" technology—splicing together strands of DNA to whip up marvels like human insulin for diabetics, growth hormones for children and antibodies for cancer patients. The two founded Genentech, the first in a wave of biotech companies. It went public in 1980, raising $35 million. Swanson died in 1999. Today his $17 billion (market cap) company does $2.2 billion in sales.

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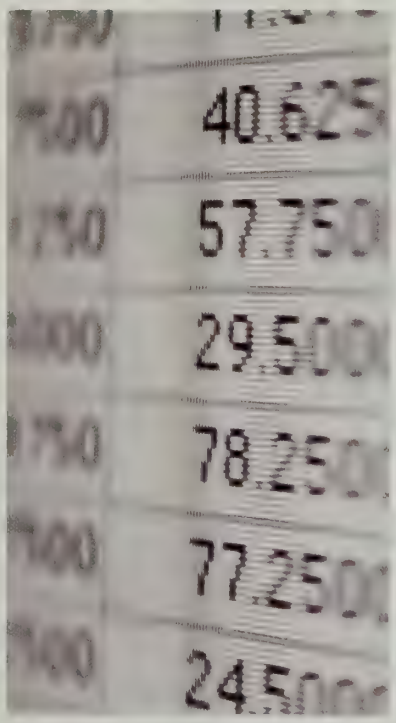
## 1977
# Cash Management Accounts

After a meeting with members of the Stanford Research Institute, Merrill Lynch chief financial officer Thomas Chrystie came up with the idea of an all-in-one account that included check-writing, money-market benefits, a Visa card and brokerage services. The idea was slow to take off, and Merrill nearly abandoned it. But it eventually became copied to the point of ubiquity, giving inspiration to those who harbored dreams of creating megabanks.




## 1977
# Original-Issue Junk Bonds

Michael Milken opened up the capital markets to fledgling firms by putting together a $30 million bond issue for a small oil company called Texas International. The bait for investors: a high yield of 11.5%. Milken continued his pioneering work throughout the 1980s at Drexel Burnham Lambert, creating a high-yield market that funded job creation and technological advancement—while earning enormous paychecks for himself. By the end of the decade the reputations of both Milken and his bonds were tarnished, but neither has gone away. Milken has fashioned himself from a onetime federal prisoner into a formidable philanthropist, and junk bonds raised $46 billion in the first 11 months of 2002 alone.

## 1979
# Spreadsheet

Daniel Bricklin (b. 1951) and Bob Frankston (b. 1949) created VisiCalc, a computer program that liberated accountants and other business professionals from hours of paper-pushing by letting them record financial data and quickly manipulate it for comparative analysis. VisiCalc also helped fuel the PC revolution by demonstrating real-world uses for the then-exotic machines. But after legal problems, VisiCalc was sold to Lotus, whose 1-2-3 had already superseded it as the dominant spreadsheet.

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# 1984
## Liquid Crystal Displays

Liquid crystals—which exist between solid and liquid states—were first discovered in 1888 by Austrian botanist Friedrich Reinitzer. They were put to use 80 years later when teams at RCA Labs and Kent State independently created early liquid crystal displays by manipulating the crystals with electrical charges. The displays first show up in digital clocks and watches, but in 1984 LCD resolution improved to the point where it could display images instead of mere text, allowing computer makers to create lightweight laptops and free PC users from their desks.

Michael Dell

# 1984
## Customized Mass Retail

Michael Dell got into the disintermediation business—bypassing distributors—during his freshman year at the University of Texas at Austin. He bought overstocked IBM PCs at cost from local dealers, then sold them to consumers at 10% below list. He dropped out of school that year, and started selling his own homemade versions of the computers for $795—built to customer specs. Now Dell dominates the PC market, posting $31 billion in annual sales. More impressive, his customized retail strategy, once an anomaly in the computer business, is now standard practice. That's good news for customers and for the mass distributors who parcel out the machines, but worrisome for conventional retail outlets.

# 1987
## Mevacor

It took more than 35 years for scientists at Merck to conjure up Mevacor, the first widely used drug that reduced cholesterol. The pill worked by blocking an enzyme from creating mevalonic acid, thwarting the liver's production of cholesterol. Under Chief Executive P. Roy Vagelos, Merck researchers developed Zocor, a second generation of the drug, and proved that it, as well as other cholesterol-lowering drugs, reduced the risk of heart attack. Zocor sales jumped in 1995 when the FDA approved it as a product to prevent heart disease in patients who already suffered a heart attack.

matic curves and swooping rooflines were two of the many legacies of America's greatest car designer. All of which live on today at the car company where he hung his hat.

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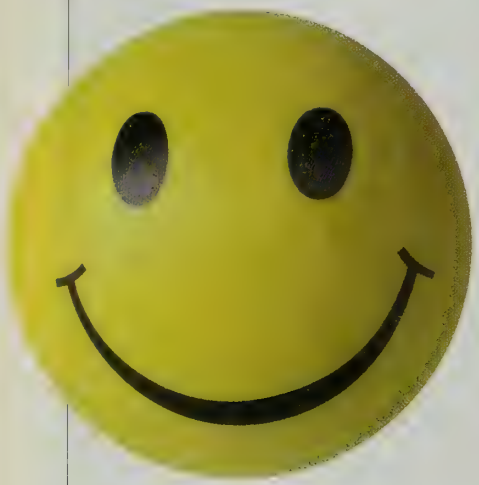
# 1987
## Prozac

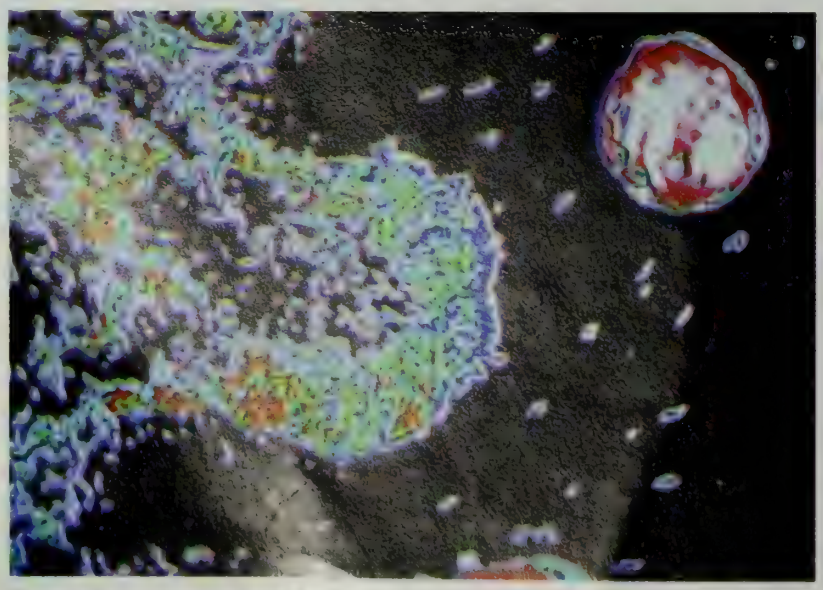
Ray Fuller, a researcher at Eli Lilly, developed a drug that alters serotonin levels and controls depression. Today Prozac is the world's most widely prescribed antidepressant, with over 40 million users in 90 countries. The pill also challenged traditional concepts of psychology and identity, igniting a debate between enthusiastic advocates and those who believe that mental states are too complex to be treated like a common virus.



Tim Berners-Lee

# 1991
## World Wide Web

Software consultant Tim Berners-Lee developed Enquire, a program that linked documents from various computers around the world, effectively granting a visa to the masses to travel through cyberspace. Marc Andreessen brought further order in 1993 by creating Mosaic, a program that allowed people to view pictures as well as well as words. Two years later, Netscape: a point-and-click browser that made surfing an indoor sport, and ushered in the era of high-flying Internet public stock offerings. Yeah, and you think it hasn't changed the world forever?


Elusive killer: Science has had a devil[illegible]me keeping up with the ever-adapting AIDS virus.

# 1995
## Protease Inhibitors

In December pharmaceutical company Hoffmann-La Roche received approval for Invirase, the first protease inhibitor for patients suffering from HIV. The new class of drug disabled the protease enzyme from duplicating the HIV virus in cells, offering the first glimmer of hope for an AIDS cure after nearly two decades of searching. Years later doctors used the drug as part of a triple cocktail that includes AZT. When taken, the cocktail helps decrease signs of the HIV virus in most patients.

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*Jerry Melton, Mohawk Carpet Industries, C*
*20,000 employ*

"Employees really love the plan. They know exactly what they'll get back, so they can plan their dental treatments accordingly. And in our case, it's a very quick turnaround with most reimbursement in under two weeks."

*Linda Ulrey, AAA Ohio Auto Club,*
*377 employe*

"What attracted us initially was the plan's simplicity. Our employees like it because there's no deductible for the first $200 in treatment and because the reimbursements are so fast."

*Diane Taylor, S&C Electric Company,*
*1,500 employ*

"We explored some of the insurance options, but were put off by the network-based plans, because we're in a rural area. When we got a call from a DR broker, the idea of flexibility and freedom of choice really appealed to us."

*James Yostrum, Ward Manufacturing, Inc.,*
*1,200 employ*

"We started conservatively, feeling it would be better to start small and grow rather than have to reduce the benefit if costs got too high. We took small steps. So far the plan has been consistently within budget."

*Fred Gunderson, White Castle,*
*5,200 employ*

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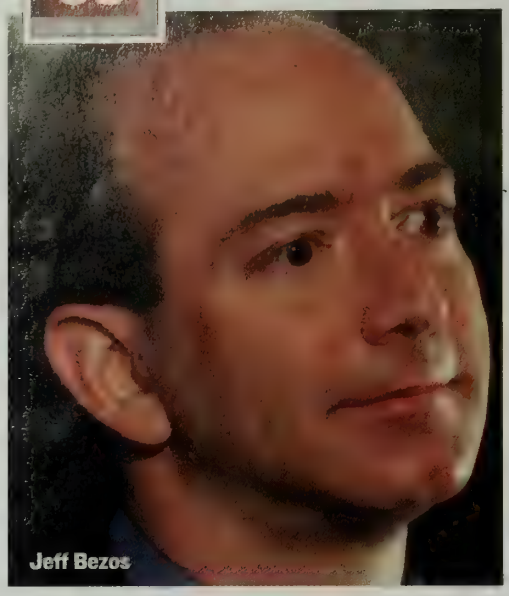
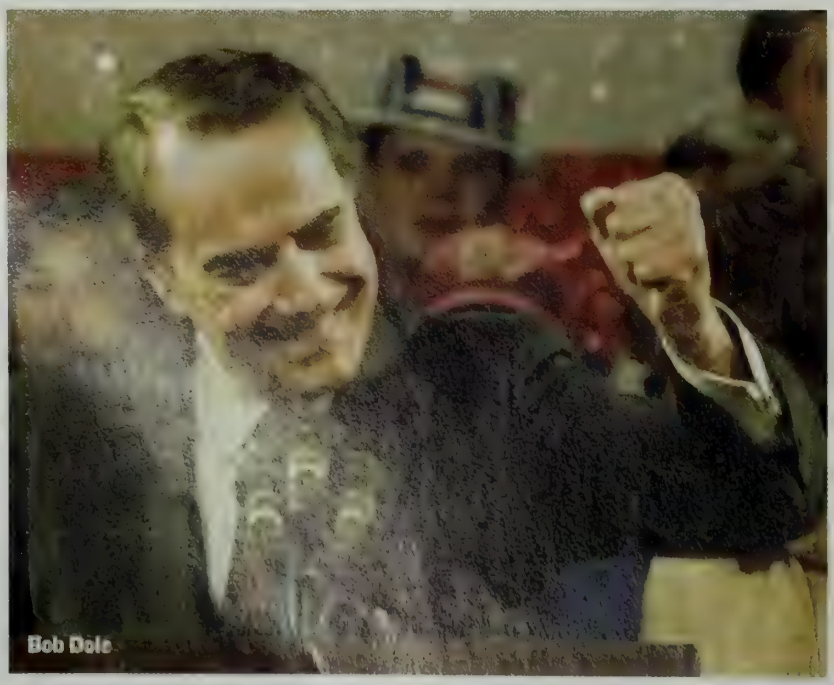
## 1995
# Internet Business

Lured by the promise of a new business paradigm, Jeffrey Bezos started selling books online at Amazon.com, and Pierre Omidyar launched Ebay, an online marketplace. Hundreds of other entrepreneurs followed suit, selling everything from bicycles to bubble gum. Most flamed out, often in spectacular style, but Amazon and Ebay endured.


Jeff Bezos

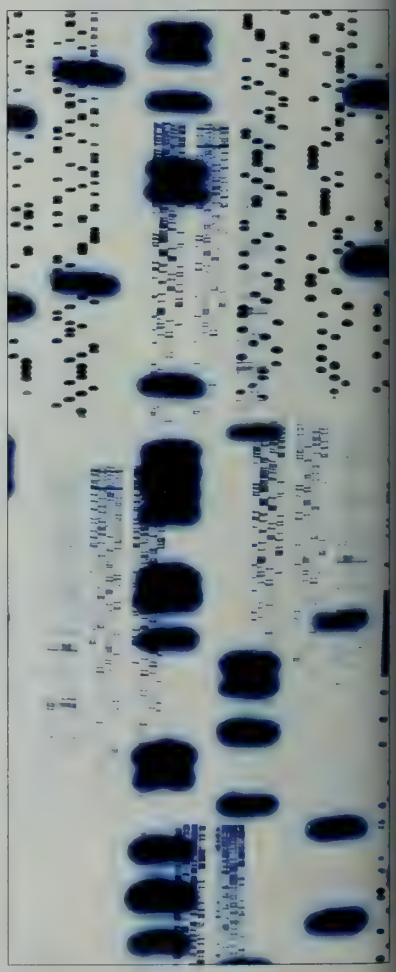
## 1998
# Viagra

Working in Pfizer's Sandwich, England office, researchers Peter Ellis and Nick Terrett noticed an uplifting, if unintended, side effect in test patients taking sildenafil citrate, a drug being developed to treat angina. They patented Viagra, making erectile dysfunction part of the national conversation and Bob Dole an unlikely celebrity spokesman. Approved by the FDA in March 1998, 3 million prescriptions were filled in the first three months. Since then some 16 million men have taken the drug and an average of nine tablets are dispensed every second. Sales to date: $5.8 billion. Viagra imitators and drugs for female sexual dysfunction are in the works.


Bob Dole

## 2000
# Automated Sequencing Machine

Using 300 high-speed DNA-sequencing machines, gene guru J. Craig Venter stunned the scientific world when his company, Celera Genomics, deciphered the entire human genetic code in just over two years and with a research budget of $270 million (it took Uncle Sam 13 years and $2.5 billion). By studying the genetic variations among humans, scientists will be better able to diagnose and ultimately cure diseases like diabetes and schizophrenia.



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# TELMEX

by Lynn Morrissey

## SOUTHERN BAJA UNVEILS A NEW TECHNOLOGY PLATFORM AT APEC 2002 FORUM

With the Asia-Pacific Economic Cooperation (APEC) Forum scheduled for late October, Telmex faced a demanding task. The company, which is Mexico's premier provider of integrated telecommunications services, needed to bring the technology platform in Southern Baja up to world-class standards for this high-profile gathering.

To guarantee superior telecom and wireless services for APEC 2002, Telmex devised a $23 million investment plan to modernize the infrastructure of the peninsula. This plan called for major fiber-optic projects, an increase in transmission capabilities, backup radio links and improvements in voice, data and Internet services. Telmex also sought to upgrade the existing public telephone system, as well as to launch advanced services such as videoconferencing and high-speed Internet access. Taken as a whole, this initiative looked beyond the telecom needs of APEC 2002; it sought to establish a cutting-edge technology infrastructure that would stimulate future economic development.

Telmex's master plan for Southern Baja consisted of several major projects, including:

- The construction of a new fiber-optic network stretching 33 kilometers along the San Jose del Cabo–Cabo San Lucas tourism corridor. This infrastructure no only improved service in the area, it provided important redundancy for the system.
- The installation of five fiber-optic rings linking telephone switches in this area with the major hotels serving the forum. This project enhanced the quality and capacity of services and also provided essential back-up infrastructure.
- The expansion of voice, data and Internet capabilities throughout the tourism corridor, as well as an increase in electric power to support energy needs. In addition, a new telephone center was constructed in Punta Ballena to meet the demand for advanced telecommunications services for an event as large as APEC 2002.
- The enlargement of the San Jose del Cabo telephone center to accommodate Internet access in various modalities, such as dial-up, Infinitum and DSLAM technology. At the request of the summit's organizers, technology also was installed to offer broadband and back-up services at participating hotels.
- The installation of three additional telephone centers to satisfy the rise in demand for telecommunications services at hotels participating in APEC.

Additionally, Telmex established a customer service plan for summit attendees with service modules posted in part ing hotels. Also available was a ful operations and maintenance cente multiple task forces ready at all tim serve the entire conference site. Give multinational nature of the event, Te established a bilingual call center to ad questions and complaints, offer instruc on domestic and international dialing, general information about services forum's events and schedule, and to callers to outside services when nee

For added security during the summit, Telmex designed a detailed response plan and placed technical st key sites to quickly address any prob or emergencies that might arise.

Through this massive infrastructure Telmex succeeded in providing leaders both sides of the Pacific with the tele services they needed to conduct a multilateral forum. At the same Telmex advanced the evolutio Mexico's telecommunications platfo setting a new standard for Southern Going forward, this enriched environ will provide the momentum for the re continued economic development.

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# They Almost Changed the World

Convertible: The Arrowbile could drive and fly.

**Many innovations flopped before they could get to market. Some ideas should never have been tried. But the inventive spirit refuses to give up.**

BY MICHAEL MAIELLO

With the spectacular collapse of so many dot-coms over the last couple of years, it's easy to forget that the history of American invention is a huge collection of failed ideas, some brilliant and unlucky, many febrile and plain idiotic. Passenger space travel may happen some day. Towing icebergs to drought-stricken areas probably won't. Aspirations, along with bad ideas, never die. Trial—and lots of error—is embedded in entrepreneurship. The impulse to change the world for the better can as easily result in a breakthrough as a humiliating, and expensive, defeat.

## Flying Cars

The dream of every commuter trapped in traffic, the "Flying Flivver" was Ford Motor Co.'s prototype single-seat plane, introduced in 1926. A stubby craft with wings that resemble dachshund ears, it never went into production, coming to an abrupt end after Harry Brooks, a friend of Henry Ford's, crashed in one off the Miami coast.

That didn't end the dream. Aviation enthusiast and Bureau of Air Commerce chief Eugene Vidal (father of novelist Gore Vidal) offered government grants to manufacturers of a "poor man's airplane"—one that could be had for $700 back in the 1930s. Inventor Waldo Waterman took him up on the offer in 1936 and built a small plane with removable wings, a clutch and a transmission, called the Waterman Arrowbile. It actually flew through the air and rumbled over roads, but didn't fly as well as the average plane nor drive as well as the average car. Waterman never mass-produced the thing and no one has since found a market for an aerial roadster.

And yet. Two months ago, at the Texas State Fair, inventor Paul Moller displayed his Skycar, a vertical takeoff-and-landing craft with a cockpit seating four and four nacelles that house eight rotary engines. "The automobile," he says, "is only an interim step on our evolutionary path to independence from gravity."

## Faxed Newspapers

Forty years before fax machines became ubiquitous, the *St. Louis Post-Dispatch* sent out 15 copies of its nine-page-long "radio edition" to a test group. A printer hooked up to an RCA radio transcribed articles onto a rolled sheet of paper. During the 1940s the *New York Times*, the *Sacramento Bee*, the *Chicago Tribune* and the *Miami Herald* all faxed abridged daily editions of their paper to radio listeners. Why bother? You could get the latest news without being tied to the living room and your Philco.

Advertisers never went for it, so newspapers had to eat the costs of receivers (the *Bee* spent $75,000 in ten months of fax publishing in 1939). During World War II the government took control of most of the radio spectrum used for fax papers and killed momentum for the idea—except for the *Miami Herald*, which dropped $24,000 in 1948.

## Videophones

In 1931 AT&T set up a two-way visual conversation between its headquarters and Bell Labs, about a mile apart in Manhattan. AT&T's existing phone lines carried the audio, while a separate TV feed brought video from one 2-inch-wide screen to the other.

Ma Bell showed up at the New York World's Fair in 1964 with the Videophone as the centerpiece of its pavilion. A hit with fairgoers, it needed work (the video display was wider than it was tall). Four years later AT&T began field trials in Chicago and Pittsburgh, signing up 300 users who paid $160 a month for equipment rental and 30 minutes of talking time. The project was shelved in 1974, after AT&T gave up trying to figure out how to sell a service that's worthless to callers unless their friends and families buy it, too.

Internet conferencing—at a fraction of the cost of AT&T's system—might be its final incarnation.

## 3-D Movies

A 1953 Warner Bros. horror film called *House of Wax* typifies the 3-D genre: Vincent Price rebuilds his wax museum after a fire by covering human bodies in wax. Blind in one eye, director André de Toth couldn't even see the stunning 3-D effects. If history is a judge, he didn't miss anything. There were 27 3-D films released in 1953, mostly horror or sci-fi. Since 1960 only 54 3-D films have been foisted on moviegoers.

The technology behind sending limbs, actors and sharks lunging out of the movie screen wasn't even that new. The technique made its premiere in three short films at Manhattan's Astor Place Theater in 1915.

As the 3-D fad waned in 1960, producer Michael Todd Jr. tried to take the moviegoer into the fourth dimension. Not time. Smell. His film, *Scent of a Mystery* (with Peter Lorre as a dirty old man named Smiley), was the premiere and finale of Smell-O-Vision, in which odors were pumped into the theater from the projection room at preestablished cues. Director John Waters sent up the concept by having scratch-and-sniff cards passed out with tickets at his 1981 film, *Polyester*.

**The first Videophone display was palm-size.**

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## Nuclear Bombs as Steam Shovels

It sounds improbably stupid, but in 1957 the Atomic Energy Commission started the "Plowshare Program" to "develop the peaceful uses for nuclear explosives." Before ending the program in 1977, Uncle Sam had spent $700 million.

In 1958 Edward Teller, a creator of the hydrogen bomb, suggested using nuclear explosions to dig a harbor near Cape Thompson, Alaska. On a tour of the region, where he stumped for "Project Chariot," Teller told residents that the explosions would be so precise that they could dig the harbor into the shape of a polar bear.

**Weapons of mass construction?**

Panama also found itself on the Plowshare target list. The 50-year-old Panama Canal had proven too small for the supertankers of the day. The U.S. wanted to build a new waterway though Panama's Darién province; nothing short of a nuclear blast could cut through the flooded rain forests and 1,000-foot-high mountains.

A voluntary nuclear test ban between the U.S. and the Soviet Union in 1958 kept the Alaska and Panama projects from entering the testing phase. When the Soviets ended the agreement in 1961, the U.S. blew a 1,280-foot-wide crater into the Nevada desert with a 104-kiloton bomb. But in 1963 the Limited Test Ban Treaty prohibited any nuclear explosion that sent radioactivity over a nation's borders. Panama and Alaska were spared by having neighbors.

## Interactive Television

Warner Cable brought the first interactive TV system to Columbus, Ohio in 1977. The Qube came with an 18-button remote control and a cable box that sent and received data at 256K per second, five times the speed of a 56K modem. Subscribers got access to 30 channels, including pay-per-view movies. Three years later American Express invested $175 million to form Warner-Amex Cable, offering the Qube in Dallas. The company spent $23 million to get 50,000 subscribers in Columbus. But viewers were turned off by the higher prices: $40 for a standard cable box and $200 for the Qube.

Warner-Amex cable built out the Qube network in eight communities, until American Express sold its stake to Warner for $450 million after a disastrous year in 1983 in which the partnership lost $150 million. Warner Cable started boxing up the Qube in 1984.

## Unlimited Solar Power From Space

The Earth is a rotten place to get solar power. The atmosphere filters out most of the sun's radiation and at night there's no sun at all. In 1968 Peter Glaser, a consultant who had managed projects on NASA lunar missions, suggested solar power collectors could be sent into outer space, where the sun's rays are unfettered. Power could be converted into an electromagnetic beam and sent back to Earth.

So in the 1970s NASA and the Energy Department spent $20 million on a grand plan: 60 orbiting satellites would infuse the U.S. electric grid with 300 gigawatts of electricity. But a new fleet of shuttles to place and maintain the satellites was the costly impediment. Price tag: $108 billion.

NASA still hasn't given up. Since renewing the solar power collecting satellite program in 1999, it's dropped about $25 million on Glaser's vision. F

**3-D flopped: Audiences prefer flat screens.**

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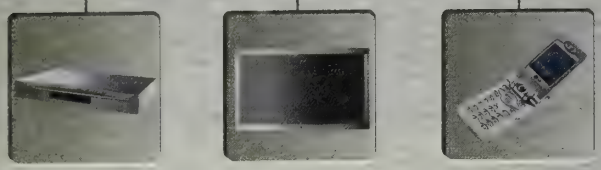

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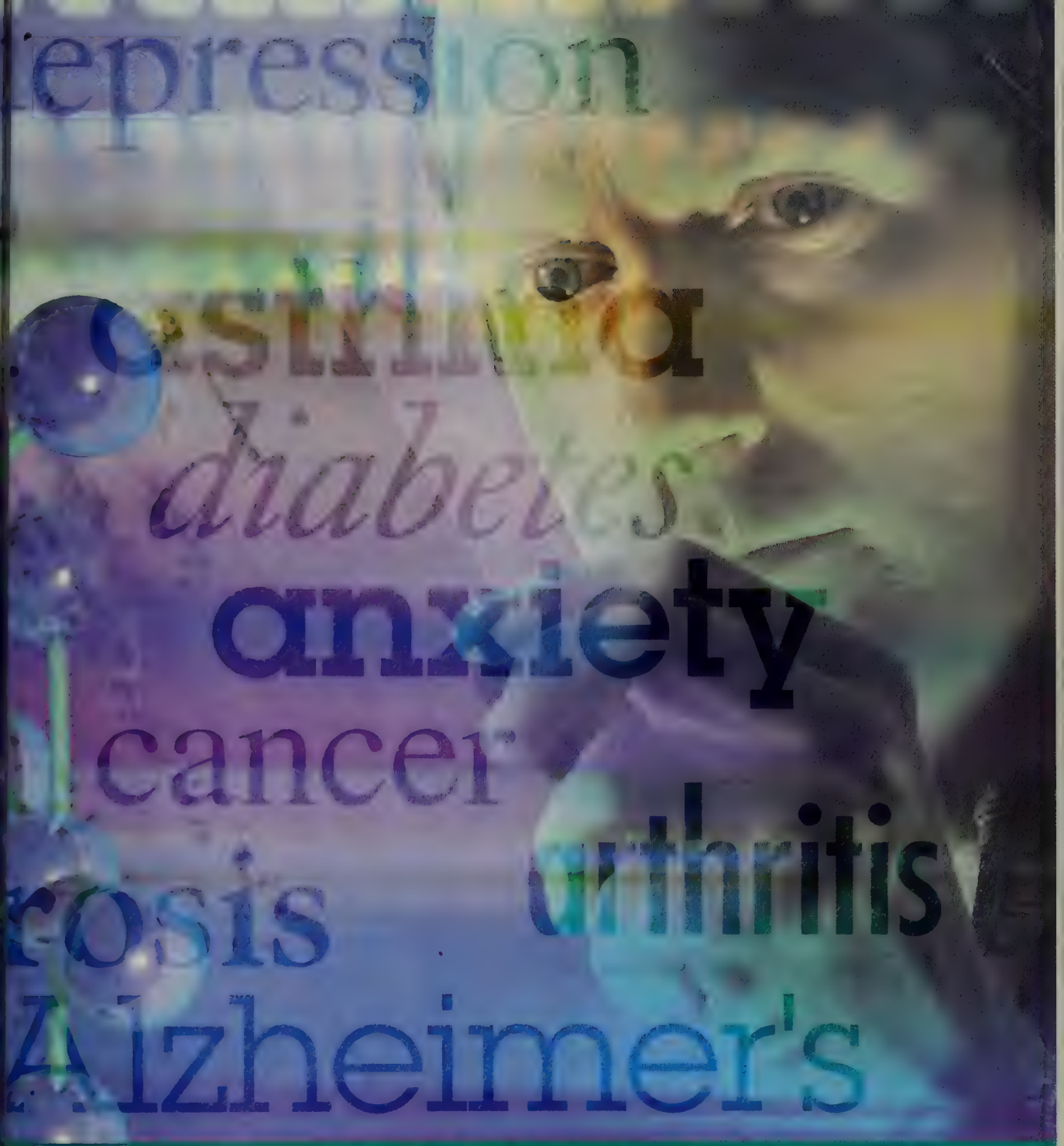


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# How to Ruin American Enterprise

## We're well on our way to squelching what gives this country an edge. What would it take to kill innovation altogether?

BY BENJAMIN J. STEIN

As a casual observer of what makes this country work and what stops it cold, I hereby offer a few suggestions on how we can ruin American competitiveness and innovation in the course of this century. I think the reader will agree with me that we are already far down the road on many of them:

1) Allow schools to fall into useless decay. Do not teach civics or history except to describe America as a hopelessly fascistic, reactionary pit. Do not expect students to know the basics of mathematics, chemistry and physics. Working closely with the teachers' unions, make sure that you dumb down standards so that children who make the most minimal effort still get by with flying colors. Destroy the knowledge base on which all of mankind's scientific progress has been built by guaranteeing that such learning is confined to only a few, and spread ignorance and complacency among the many. Watch America lose its scientific and competitive edge to other nations that make a comprehensive knowledge base a rule of the society.

2) Encourage the making of laws and rules by trial lawyers and sympathetic judges, especially through class actions. Bypass the legislative mechanisms that involve elected representatives and a president. This will stop—or at least greatly slow down—innovation, as corporations and individuals hesitate to explore new ideas for fear of getting punished (or regulated to death) by litigation for any misstep, no matter how slight, in the creation of new products and services. Make sure that lawsuits against drugmakers are especially encouraged so that the companies are afraid to develop new life-

**Benjamin J. Stein** is a lawyer, economist, writer and actor, and host of the game show *Win Ben Stein's Money.*

saving drugs, lest they be sued for sums that will bankrupt them. Make trial lawyers and judges, not scientists, responsible for the flow of new products and services.

3) Create a culture that blames the other guy for everything and discourages any form of individual self-restraint or self-control. Promote litigation to punish tobacco companies on the theory that they compel innocent people to smoke. Make it second nature for someone who is overweight to blame the restaurant that served him fries. Encourage a legal process that can kill a drug company for any mistakes in self-medication. Make it a general rule that anyone with more money than a plaintiff is responsible for anything harmful that a plaintiff does. Promulgate the pitiful joke that Americans are hereby exempt from any responsibility for their own actions—so long as there are deep pockets around to be rifled.

4) Sneer at hard work and thrift. Encourage the belief that all true wealth comes from skillful manipulation and cunning, or from sudden, brilliant and lucky strokes that leave the plodding, ordinary worker and saver in the dust. Make sure that society's idols are men and women who got rich from being sexy in public or through gambling or playing tricks, not from hard work or patience. Make the citizenry permanently envious and bewildered about where real success comes from.

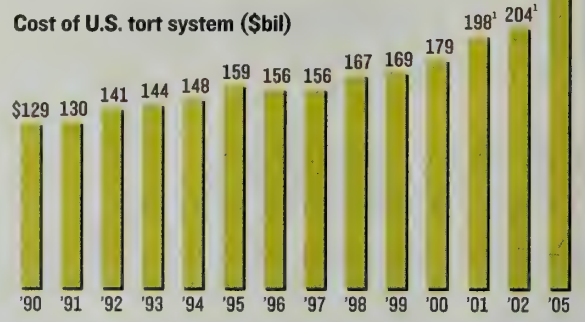
5) Hold the managers of corporations to extremely lax standards of conduct and allow them to get off with a slap on the wrist when they betray the trust of shareholders. This will discourage thrift and investment and ensure that Americans will have far less capital to work with than other societies, while simultaneously developing that contempt for law and social standards that is the hallmark of failing nations. Hold the management of labor unions to no ethical standards.

6) While you're at it, discourage respect for law in every possible way. This will dissolve the glue that holds the nation together, and dissuade any long-term thinking. Societies in which the law can be clearly seen to apply to some and not to others are doomed to decay, in terms of innovation and everything else.

7) Encourage a mass culture that spits on intelligence and study and instead elevates drug use, coolness through sex and violence, and contempt for school. As children learn to be stupid instead of smart, the national intelligence base needed for innovation will simply vanish into MTV-land.

## Bring on the Lawyers

**Not impressed by billions? Consider that tort costs have eaten up, on average, 2% of GDP every year since 1990 and could rise to 2.4% by 2005.**




[1]Insurance Information Institute estimates assume tort costs equal to 2% of GDP.
*Source: Tillinghast-Towers Perrin.*

8) Mock and belittle the family. Provide financial incentives to people willing to live an isolated existence, vulnerable and frightened. This guarantees that men and women of sufficient character to bring about innovation will be psychologically stifled from an early age.

9) Develop a suicidal immigration policy that keeps out educated, hard-working men and women from friendly nations and, instead, takes in vast numbers of angry, uneducated immigrants from nations that hate us. This, too, leads to the shrinking of our knowledge base and the eventual disappearance of social cohesion.

10) Enact a tax system that encourages class antagonism and punishes saving, while rewarding indebtedness, frivolity and consumption. Tax the fruits of labor many times:

First tax it as income. Then tax it as real or personal property. Then tax it as capital gains. Then tax it again, at a staggeringly high level, at death. This way, Americans are taught that only fools save, and that it is entirely proper for us to have the lowest savings rate in the developed world. This will deprive us of much-needed capital for new investment, for innovation and our own personal aspirations. It will compel us to ask foreigners for ever more capital and allow them to own more of America. It will also promote an attitude of carelessness about the future and, once again, encourage disrespect for law.

11) Have a socialized medical system that scrimps on badly needed drugs and procedures, resorts to only the cheapest practices and discourages drug companies from developing new drugs by not paying them enough to cover their costs of experimentation, trial and error.

12) Elevate mysticism, tribalism, shamanism and fundamentalism—and be sure to exclude educated, hardworking men and women—to an equal status with technology in the public mind. Make sure that, in order to pay proper (and politically correct) respect to all different ethnic groups in America, you act as if science were on an equal footing with voodoo and history with ethnic fable.

My list need not end here. But I stopped at a dozen because I realized that this is already, in large measure, the program of so many of our elected representatives. The debauchery of our tort system is already in place, and the rest of the agenda is under way. F

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# The Camels of Innovation

**Following in the path of yesterday's software wizards are today's infotech plodders. You'll find them amassed in suite hotels. Thank them for the nation's productivity gains.**

BY DAVID BROOKS

It's 7 a.m., feeding time at the suite hotels. At Holiday Inn Expresses and AmeriSuites hotels, at Residence Inns and Marriott Suites all across America, the final touches are being put on complimentary continental breakfast spreads. Miniature muffins carefully stacked on their carousels, melon balls piled into plastic bowls—all awaiting the new heroes of America.

Up in the rooms infotech seminar leaders are slipping on company-logo polo shirts, wondering if they should hang up their towels or leave them on the floor for washing and thereby cause irreparable harm to the environment. Sales reps are tying their criminally boring neckties, catching the last few minutes of *SportsCenter*. As for the men and women who are in town to present a new-business idea to angel investors, they've already pocketed the tiny hand lotions from the bathroom; they can't help lifting them even if they've already got a half-dozen in their travel bags.

Down in the breakfast area CNN is blaring, *USA Todays* are being read, and the sales reps and seminar camels are turning on their cell phones, pagers, BlackBerrys and ruggedized palmtops. The AARP roadies—senior citizens who roam the country visiting grandchildren—won't be down for another hour, so now it's all hardworking business types sipping coffee at the too-small tables, preparing for another day of work on the road.

It's not all that glamorous being a business bedouin, traveling from one moderately priced highwayside hotel to the next. But these people are the guts of the American economy—and innovation.

Call them the demure successors to the Bobos (bourgeois bohemians)—information-age elites who brought us Restoration Hardware, vegetarian dog biscuits, ice cream companies with their own foreign policies (Ben & Jerry's), Silicon Valleyites who worked in black T shirts and hiking boots, as if getting up for the Norwegian Winter Olympics team.

That highly educated elite still exists, but it no longer defines the times. Life and the economy have become a little crueler. In times like these you return to the fundamentals. Who is keeping us safe? Who makes us financially secure? How to preserve us as the most productive nation on earth, by far?

Who is keeping us strong? Alan Greenspan has long championed the idea that productivity keeps advancing because companies are using information technology at every level of the production process. And the people who make that possible are not only the software geniuses in their Silicon Valley aeries. It's the regular men and women who do the IT training sessions, who take out the bugs and fix the crashes, who adapt the technology factory by factory, cubicle by cubicle. It's also the people who refashion production techniques and packaging designs, and market store-display innovations. These people are the technology camels, hauling the riches of the cutting-edge research centers across the vast expanse of the empire and making them avail-

**David Brooks** is a senior editor at the *Weekly Standard* and the author of *Bobos in Paradise*.

Wednesday, November 20, 2002
Money
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able to the regular Dilberts, shoppers and keyboard jockeys.

The quintessential icons of our age can't be found in an REI outdoor gear store—like the would-be instant millionaire, thinking of opening an enviro-lodge. Look for them in the suite hotels. That's where the technology packhorses roll in tired after a day of training sessions, meetings and seminars. And where the low-key entrepreneurs are unfabulously building the companies that will be famous tomorrow.

In this new decade and century the most revolutionary advances are made in the most boring places by the least flamboyant people. Where do they work? At some outfit designated by three initials—DRG Systems, AZD Marketing, MLF Solutions—or at one of those compound-named firms with a stray capital letter in the middle: SignRave, MedScie, MerchanDesign. They toil in dull-looking office parks, where the most exciting thing that meets the eye is the $15 airport van cruising by the FedEx drop-off boxes.

These people are masters of small but cumulative achievements. Here's somebody selling cash registers that print out receipts a bit faster. That may not sound like much, but if you've got hundreds of transactions a day, it adds up to real productivity gains. Here's a sales rep on another day of cold calls, handing out another pile of business cards. There's a woman in the store-signage business, figuring out a way to make grocery store placards that are hollow—using less material and costing 20% less to produce. And a pair working on drugs to eliminate diseases that have plagued us for all of human history. They're reshaping DNA, curing hereditary diseases, flirting with cloning. They casually mention categories of drugs called Indys ("I'm not dead yet") that could prolong human life beyond imagining. All radical stuff, carried out by calm, cautious people. They are the most unfabulous revolutionaries in the history of man—slowly remaking human nature.

How do these suite-hotel people do it? Here's their secret: They go to work every day. Every day, by sheer force of diligence, they make some small bit of progress toward their goals. No dramatic launches of public offerings. No huge one-day scores. Just one more day figuring out a problem at the keyboard or under the ventilating hood, making another set of sales calls, teaching another roomful of people about the latest software upgrades.

You won't find them with a copy of *Unlimited Riches* or *Leadership* or *Fast Company* magazine. Instead, they're reading *Coatings World*, the trade journal of the paint industry; *Point of Purchase*, a trade mag for those who make packages and other store supplies; and the *American Journal of PharmacoGenomics*.

A lot of these people are in the idiot-proofing business. You buy a video camera and toss the manual—yet the thing is designed to let you perform basic tasks with no training. Simple as renting a car without sitting in the parking lot learning about your vehicle, as rental agencies advise.

These information age workers who create all this convenience are nerdy, not neurotic. They can work with others on a project, develop relationships, accomplish things. Inadvertently, they're helping business-school profs come to grips with the essential question of all successful enterprises. Namely: "What can I do for you?"

To anticipate and serve customer needs, these nondescript people pay a lot of attention to other people. When these traveling capitalists gather in over-air-conditioned hotel conference rooms to hear motivational speakers, they are looking to get a little adrenaline rush to keep their creative juices flowing and find new ways to build trust with the people around them—ways to establish "collaborative relationships," "two-way dialogues," "enduring partnerships"—or whatever the latest buzzwords happen to be.

In short, these suite-hotel people are marching ceaselessly toward their goals. They are building and striving and improving. Why be content with a liquid highlighter pen when somebody can come along and invent one that is dry even when you first apply it? Why be happy with a mere 100 flavors of Snapple iced tea when the human mind can concoct up to twice that many? Why should a hotel desk lamp merely provide light when it can also contain an electrical outlet and a phone jack for your laptop so you don't have to crawl around the floor plugging stuff in? Why not be able to enjoy five more years of life without debilitating disease?

Right now, as you are reading this, the suite hotels are filling up, the business bedouins are settling in, trying to find ESPN on the tube. They may not look inspiring, but deep in the recesses of their brains they have these little ideas—a fast-food restaurant concept no one has ever anticipated, an assembly-line innovation that can lower production costs by 50%, a retirement-plan wrinkle to save everyone's 401(k)—and, someday, assuming they can find their toothbrushes amid the stash of moisturizing-cream bottles in their travel bags, they are going to realize their dreams. F

**Those creating all this convenience are nerdy, not neurotic.**

# lentity Management

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# Consumer Knowledge Can Be Key To Holding Down Rising Healthcare Costs

Rapidly rising healthcare costs are driving up health insurance premiums for our nation's employers and no business - large or small - appears to be immune.

**Many are unaware of the total cost of their medical care because it is often virtually invisible to them.**

To better cope, many employers are passing on a portion of the increased costs of benefits to their workers through higher premium contributions, deductibles or

cutbacks in the scope of health benefits. This scenario also brings the increased need for more engaged and savvy healthcare consumers.

Most consumers recognize the overall impact rising healthcare costs have on our nation, but many feel they have no direct role as individuals in controlling costs. Many are unaware of the total cost of their medical care because it is often virtually invisible to them. Consumers usually only see - and think about - the portion that they pay out-of-pocket to their doctor, pharmacy or hospital.

## Every Consumer Can Make a Difference

The good news is that, as healthcare consumers, we all can play a role in helping contain healthcare costs. We can start by asking questions and being better informed. For example – understanding what is covered under our policy and which doctors and hospitals are available in our networks. It also is important to become familiar with our health plan's drug formulary and understand the difference in cost when choosing generics versus brand-name drugs.

We also can ask questions about prescribed medication and recommended tests. For example, do we really need a particular brand-name medication or is there a generic available? Or is a certain test really medically necessary?

## Defining Value in the Healthcare System

In order to better contr dramatically rising healthca costs, as consumers we can bett understand what adds value the healthcare system. Qual healthcare is defined as getting th right care, at the right time and the right setting.

The goal of the Blue Cross a Blue Shield System is to make su our healthcare system remai affordable and state-of-the-art, bo in terms of life-saving technolo and new clinical practices. By taki a hard look at the value of o healthcare expenditures and armi ourselves with the right knowled we as consumers can help accompli this important goal.

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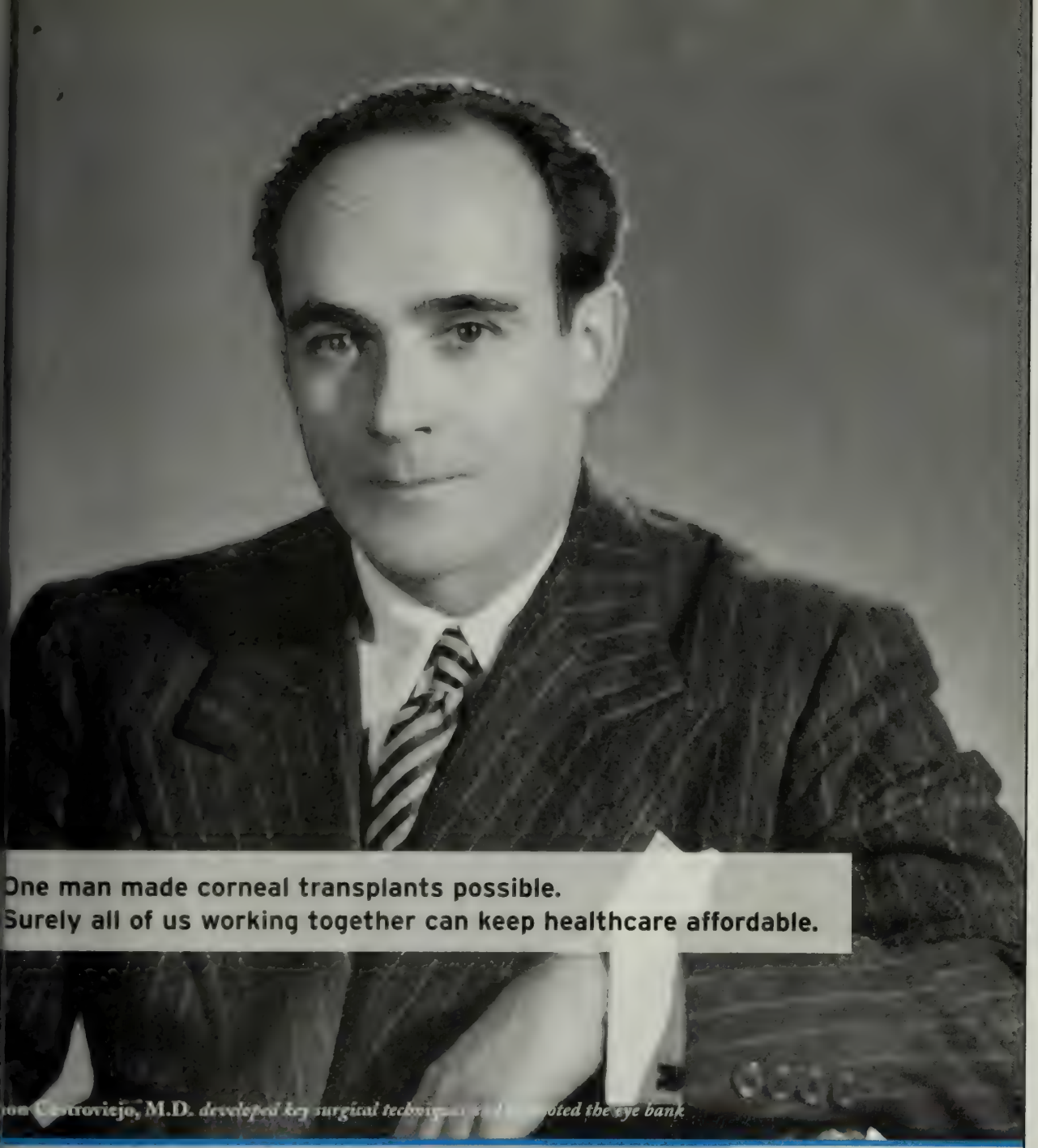


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# The Confidence Game

## Why I trust the most disgraced chief executive more than I do the most reputable public servant

BY GEORGE GILDER

Why do I trust Gary Winnick and Jeffrey Skilling—nefarious former chief executives of notoriously bankrupt companies—more than I trust Senator John McCain of vaunted valor in prison camps or David Broder of Pulitzer fame or Senator Joseph Lieberman of famously flinty integrity? Why do I trust Kenneth Lay of Enron and Bernard Ebbers of WorldCom more than I trust Justices William Rehnquist and Antonin Scalia, the stalwart intellectual leaders of a nominally conservative Supreme Court, or even George W. Bush, that most trusted of Presidents?

Why do I trust General Electric chief emeritus Jack Welch or AT&T Chief Michael Armstrong more than I trust the entire scientific and environmental coverage in the *New York Times* and all the venerable editors of the increasingly political *Scientific American*? Why do I trust Martha Stewart and ImClone's Sam Waksal far more than I trust the crusading journalist James B. Stewart or New York State Attorney General Eliot Spitzer, trustbuster deluxe, as they righteously seek to banish moneylenders, marketmakers and conflicts of interest from the temples of Wall Street?

The reason I trust disgraced executives more than politicians, judges and journalists is the same reason that I trust physicists more than I trust sociologists. The answer comes from the eminent philosopher of science Karl Popper: falsifiability. In science, falsifiability means that a hypothesis is presented with sufficient rigor to be proven wrong, that is, falsified. It is the condition of trust. By contrast, the sociologist deals in broad propositions—such as "ethnic diversity improves educational outcomes" or "patriarchy causes war"—that, by sinking into a mush of definitions, defy disproof.

Except when conducting trials of identifiable crimes such as murder or assault, judges are no more truthful than politicians or journalists. They

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all adhere to the "ring-true" standard of sociology rather than the falsifiable standard of physics. Most of the time, as physicist Wolfgang Pauli put it in another context, they are not even wrong. Their statements lack the rigor to rate as lies and swim in the ontological soup of the verb "to be." From such a soup, no enduring truths can evolve.

Like a physical experiment, every entrepreneurial venture embodies and tests a hypothesis about products or markets. Intel is currently preparing to test the hypothesis that computer companies will choose a microprocessor that runs at 3 gigahertz, or 3 billion cycles a second, and will buy it in sufficient volumes that Intel can profitably manufacture it in a plant that costs $2 billion to build and equip. Samsung is testing whether people will buy a cell phone that takes digital photographs. Ebay is testing whether it can move beyond Web auctions of used wine openers to Web auctions of $20,000 antique cars, and to TV programs. The presence of such testable hypotheses distinguishes investment from both gambling and government planning. A true gamble does not test a refutable principle. Therefore it cannot produce valuable knowledge. Likewise, a nationalized business with guaranteed markets cannot yield falsifiable information.

Knowledge emerges not from chaos, or fixity, but from conditions of uncertainty. Under capitalism power flows to precisely the people who are willing to stake their money not on gambles or sure things but on testable hypotheses, thus generating knowledge and wealth for society. Entrepreneurs are trustworthy because they accept a moral code of testability and falsifiability rather than one based on sentiment, sanctimony, good intentions, good press, good luck, good looks or guarantees.

Bankruptcies play the same role in economic progress that falsifiability plays in the progress of ideas. Both sciences and businesses advance as much by disproof as by affirmation. Every capitalist investment has the potential for a dual yield: a financial profit and an epistemological profit. One without the other is sterile. Economies progress when the process of investment is informed by the results of previous investments. What makes the entrepreneur uniquely trustworthy is that he combines in one person these two yields of enterprise. If his venture succeeds, he also gains the power—through profits—to make further investments, further experiments in light of his initial venture. If his venture fails, he and other investors who shared his confidence in the business may well lose wealth, and the project will sooner or later be halted, no matter how commendable and morally uplifting it is. But even as money is lost, epistemological profit is gained, distilled through the learning effects of direct experience.

I trust chief executives because they deal in projects that can go bankrupt. They cannot repeatedly or consistently lie about their companies because the truth will out in a relatively short time. Even at Enron, Lay and Skilling could deceive themselves and the public only for a matter of months. Skilling got skittish—and got out. Lay maintained his faith through no fewer than 14 margin calls that he had to meet by selling Enron shares. Both Enron stars learned their lessons (about off-the-books subsidiaries and financial engineering, for example), and they taught them to the world.

Gary Winnick and his serial executives at Global Crossing also submitted to the crucible of experience. Building a unique global network of optical fiber, they learned the perils of debt in a deflationary market. Selling a quarter of his shares at a $600 million profit, Winnick also signaled a belief that they were fairly valued or even overvalued. Many other shareholders did not trust that signal, though they should have. Now politicians want to banish such information from markets altogether in the name of making them more transparent and trustworthy. But most business information is uncertain most of the time. Which means that bans on insider trading make markets more treacherous, since prices will not move until outcomes are sufficiently certain to be announced. Insider trading rules make the executive personally liable for getting things wrong, though much of what any chief executive—or any person—thinks at any particular time is wrong. Thus the law bars all the guesses and intuitions of people closest to the company from influencing the price of the shares.

While executives can be trusted to face reality and learn from it, even if it means bankruptcy, no such corrective faced the politicians and judges who allowed the bankruptcies of some 35 onetime producers of asbestos on account of preposterous claims of "potential illnesses" from this mostly safe and useful material. No such edifying gauntlet faced the government

**Bans on insider trading make markets more treacherous.**

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officials and politicians who brought down 70 telecom companies through a series of egregious policy errors of telecom reregulation and monetary deflation.

Politicians are indignant about bankruptcy. They deem it a crime, rather than a punishment. But they would never tolerate the equivalent outcome for themselves. To prevent such a catastrophe, incumbent politicians such as McCain and Lieberman, who want us to trust them, have been busily enacting campaign-finance rules that bar anyone without a personal fortune from displacing them. But even the loss of an election does not require the abnegation faced by a bankrupt entrepreneur, or the recanting expected of a scientist whose findings have been falsified. Coming from an entirely different culture, politicians and journalists are baffled by enterprise and science. But the most crucial reason to distrust nearly everything said by politicians is their defiance of truth and reality on issues of science.

Example: In one of the most brazen chemophobic claims in the history of science and government, politicians around the world are now condemning carbon dioxide (the air that we breathe out and plants imbibe) as a dangerous pollutant. Seeking new controls on the global economy, Greens urge implementation of the Kyoto Protocol on global warming, which would cost $500 billion a year to apply, reliably causing a Third World holocaust of famine and poverty. Citing a nonexistent consensus of scientists, the political choirs ignore all evidence that temperatures today, though admittedly warming up from the "little ice age" of the last millennium, are cooler than their average in the human era. By many paleochemical calculations, corroborated by historical record, global temperatures were several degrees warmer 1,000 years ago, 3,000 years ago and 6,000 years ago, long before humans began using fossil fuels. Rushing to justify new government powers over the global economy, journalists and politicians simply do not deign to consider the available data on the history of weather.

Politicians get away with denouncing reality and blaming it on executives and other private-sector powers. But driving most of the misrepresentation in business is the labyrinth of laws through which the chief executive has to guide his company, following the advice of lawyers and accountants and sharpie chief financial officers. Since corporate tax laws and securities regulations make no sense, executives do not bother to learn the details, leaving interpretation of the cabalistic codes to highly paid experts with many years of training and specialized degrees. Journalists who would never dream of filling out their own tax returns deride executives who claim they have no clear idea of the contents of thousands of pages of mandated forms and accounts that remain unread by anyone, including the government bodies that mandate them—until bankruptcy or recession lends 20-20 postmortem clairvoyance to press, politicians and prosecutors. Depreciation rules that assign lives of 15 years to telecom switches that grow obsolete in 15 months make "the capitalization of expenses" a mandatory part of telecom business. Mandatory, that is, when the government mandates it. Otherwise, as in the case of WorldCom, it becomes felonious. As the President put it, "Corporate accounting is not necessarily black and white."

What makes these accounts so critical to politicians are insider trading regulations that try to create a level playing field for both a taxi driver and Warren Buffett. With all other information pushed beyond the pale, politicians want to believe that the quarterly numbers are meaningful and sufficient guides to investment. But without inside information of material significance, investment loses its falsifiable basis and becomes a form of gambling. Buffett or the executives of General Electric or the masters of Silicon Valley's venture capital would never think of staking their funds without inside knowledge unavailable to hoi polloi. Inside knowledge is perfectly legal for all these players, who sit on multiple boards, read hundreds of for-their-eyes-only business plans, and shuffle capital among hundreds of companies under a corporate umbrella or within a portfolio.

> Politicians deem bankruptcy a crime, when it's a punishment.

The law denies inside information only to the layman, who is expected to invest on the basis of technical analysis (the voodooistic interpretation of past trading patterns), Keynesian economic astrology, quarterly earnings reports known to the world and other trading trivia. While investigators pore over tomes of paperwork to ferret out the possibly inside provenance of information about ImClone—which had already plunged the stock ten points when Martha finally sold—the rest of the world is left to contemplate the baffling challenge of finding any shred of actionable data about a company that cannot be deemed an inside tip. The idea of a level playing field of information is ridiculous on its face, since information is defined as a deformation of the level. Outside

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analysis is mostly useless to investors—because it is outside, and thus widely known and already reflected in the prices of shares.

Chief executives understand that it is impossible to banish insider trading without crippling the markets themselves. They grasp that conflicts of interest are ubiquitous in life and that intelligent people take them into consideration when appraising a particular report, tip, argument or analysis. But politicians rule a realm where rhetoric trumps reality, where they imagine they can guarantee corporate purity with Chinese walls and chastity belts among analysts and bankers, forced recusals by "interested parties," mandated "independent" board members, executive seals and signatures on all accounts, back-checks and other fake remedies imported from the world of law and politics. Amid the fun-house mirrors of insider trading rules, we now live in a world where the only investors free of suspicion are people who channel their money into companies they know nothing about. Approved by politicians everywhere, the best investment by this measure is a state-run lottery or, more significantly, an all-market index fund from which all useful inside information has been excluded. If people are not allowed to put their money in companies they understand, capitalism loses its advantage over socialism, since what makes capitalism succeed is the assignment of capital to the insiders who earned it—and thus learned how to invest it profitably.

The insanity of our securities laws, and even our tax laws, is nothing compared with the sand thrown into capitalism's gears by American antitrust law. Based on the idea of perfect competition, where the market is omniscient, this code is as unenforceable as the insider trading rules. Now coming forward with treble-damage antitrust claims are the likes of class action attorney William Lerach. Under the rules, companies today can set any price they choose for their output, as long as it is not too high (gouging), too low (predatory dumping) or just right (collusion). At present Micron Technology and other producers of dynamic random access memory chips for computers—one of the most competitive industries on the planet—are confronted with charges from the Justice Department that imply all three pricing offenses at once.

# The insanity of securities law can't compare with antitrust claims.

No government program has ever gone broke, which is why politicians need never face the inconvenience of weighing the truth or falsity of their claims while they calibrate them to the resonant frequencies of their audiences. Republicans were cruelly unfair to Bill Clinton, whom they assailed as dishonest, when in fact he was fully honest to his trade as a Democratic politician. Republicans are scarcely better. They adopt a different idiom, oriented toward people in businesses, churches, constabularies and intact families, rather than toward single mothers, academics envious of others' success, union members, government workers, criminals and professional Greens or grievance groups. But politicians in neither party tell the kinds of truths espoused by physicists.

When a politician breaks the pattern and speaks the truth—normally in a crisis too sudden to permit the conducting of a public opinion poll—he gains instant beatification, as Rudy Giuliani and George W. Bush discovered after Sept. 11. The public reels in amazement and admiration, as if their dog had begun to sing Schubert lieder. After a time, though, the politician wishes to discover what it was that elicited the public enthusiasm. He takes a poll.

Chief executives trust the personal opinions of their customers, who voluntarily and authoritatively choose what to buy with their own money. Politicians collect the money of others in order to spend it on public purposes sanctioned by figments of aggregate opinion.

In a profession offering a limited number of powerful slots—100 senators, 50 governors, 1 President—politicians live in a zero-sum world, where the gains of one necessarily come at the expense of others. In an election, one candidate wins and the other loses. In a zero-sum world, you may envy or blandish others, but you cannot trust them, because you can assume they are seeking to aggrandize themselves at your expense. Thus politicians necessarily distrust one another and the public. It is natural for them to tax and regulate people coercively.

By contrast, chief executives know that their success is dependent on grasping a reality that they can never comprehend in its fullness themselves. In order to win they must trust others and collaborate with them. Their success depends on the successes of others; their own enrichment relies upon the enrichment of their customers and collaborators; their own profits stem from the dignity of voluntary personal choices, rather than coercive appropriations. Their entire enterprise is ultimately founded on trust. That is ultimately why I trust them. They trust me. F

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# A Virtuous Cycle

**Look past today's scandals and you'll find that capitalism has always been founded on trust, honesty and decency. That's the only way it works.**

BY JAMES SUROWIECKI

In 18th- and early 19th-century Britain a sizable chunk of the nation's economy was run by members of the religious sect known as the Quakers. Quakers owned more than half of the country's ironworks. They were key players in banking (both Barclays and Lloyds were Quaker institutions). They dominated consumer businesses like chocolate and biscuits. And they were instrumental in facilitating the transatlantic trade between Britain and America.

Initially their success was built around the benefits Quakers got from trading with one another. Because they dissented from the Church of England, members of the sect were barred from the professions and as a result gravitated toward business. When Quakers went looking for credit or for trade, then, they found it easy to partner with fellow believers. Their common faith facilitated trust, allowing a Quaker tradesman in London to ship goods across the ocean and be certain that he would be paid when they arrived in Philadelphia.

Quaker prosperity did not go unnoticed by the outside world. They were well known already for their personal emphasis on absolute honesty, and as businessmen they were famously rigorous and careful in their recordkeeping. They also introduced innovations like fixed prices, which stressed transparency over sharp dealing. All of this clean living, as it were, paid off. Soon, people outside the sect began to seek out Quakers as trading partners, suppliers and sellers. And as Quaker prosperity grew, people drew a connection between that prosperity and the sect's reputation for reliability and trustworthiness. In the long run, observant businessmen came to see, being trustworthy was more lucrative than being Machiavellian. Honesty was the best policy.

Or so it once seemed. In the wake of the corporate scandals of the past year, the idea that trustworthiness and business success go hand in hand now appears almost painfully naive. We've grown used to the spectacle of chief executives looting companies and walking away with tens or hundreds of millions of dollars while leaving their shareholders, their employees and their creditors with little or nothing. And the idea has taken hold that the Enrons and WorldComs are not aberrations, but rather the inevitable by-products of a system that plays to people's worst impulses: greed, cynicism and selfishness. What happened at Enron, the argument goes, was a perfect expression of capitalism and its excesses.

**James Surowiecki** is a business columnist for the *New Yorker* and is writing a book on decentralized decision-making.

This argument sounds plausible, if only because capitalist rhetoric so often stresses the need to destroy the other guy and the virtues of what "Chainsaw Al" Dunlap liked to call "mean business." But this popular image of capitalism bears little resemblance to

GENERAL STORE

its reality, and if you wanted to find a real example of how the system works, you'd be better off picking one of those Quaker tradesmen than you would Jeffrey Skilling. Over time, in fact, the evolution of capitalism has been in the direction of more trust and transparency, and less self-serving behavior; not coincidentally, this evolution has brought with it greater productivity and economic growth.

That evolution, of course, has not taken place because capitalists are naturally good people. Instead, it's taken place because the benefits of trust—that is, of being trusting and of being trustworthy—are potentially immense and because a successful market system teaches people to recognize those benefits. At this point, it's been well demonstrated that flourishing economies require a healthy level of trust in the reliability and fairness of everyday transactions. If you assumed every potential deal was a rip-off or that the products you were buying were probably going to be lemons, then very little business would get done. More important, the costs of the transactions that did take place would be exorbitant, since you'd have to do enormous work to investigate each deal and you'd have to rely on the threat of legal action to enforce every contract. For an economy to prosper, what's needed is not a Pollyannaish faith that everyone else has your best interests at heart—"caveat emptor" remains an important truth—but a basic confidence in the promises and commitments that people make about their products and services.

Establishing that confidence, then, has been a central part of the history of capitalism. In the medieval period people found that confidence primarily within their particular group. Historian Avner Greif has shown how the Maghribi built a trading system across the Mediterranean in the 11th century by creating a system of collective sanctions to punish those who violated their commercial codes. Trade among groups, meanwhile, depended on rules that applied to the group as a whole. If one Genoese trader ripped off someone in France, all Genoese traders paid the price. This may not have been exactly fair, but it had the virtue of creating conditions under which interstate trading could flourish, since it obliged trading communities to enforce internal discipline to encourage fair dealing. On the flip side of this, merchant guilds—most notably the German Hanseatic League—protected their members against unfair treatment from city-states by imposing collective trade embargoes against cities that seized merchant property.

As the Quaker example suggests, intragroup trust remained important for centuries. (For that matter, it remains important today—look at the success of ethnic Chinese entrepreneurs in Southeast Asia.) But in England, at least, contract law evolved to emphasize individual responsibility for agreements and, more important, the idea of that responsibility began to take hold among businessmen more generally. As one observer put it in 1717, "To support and maintain a man's private credit, 'tis absolutely necessary that the world have a fixed opinion of the honesty and integrity, as well as ability of a person." About the same time Daniel Defoe famously wrote, "An honest tradesman is a jewel indeed, and is valued wherever he is found."

Still, Defoe's very emphasis on how valuable people found an honest businessman is probably evidence that there weren't that many of them. And the Quakers, after all, became known for their reliability precisely because it seemed exceptional. It's certainly true that the benefits of honesty and the relationship between trust and healthy commerce were recognized. Adam Smith, in *The Wealth of Nations*, wrote, "When the greater part of people are merchants they always bring probity and punctuality into fashion," while Montesquieu wrote of the way commerce "polishes and softens" men. But it wasn't until the 19th century—not coincidentally, the moment when capitalism as we know it flowered—that trust became, as it were, institutionalized.

As the historian Richard Tilly has shown in his study of business practices in Britain and Germany, it was during the 1800s that businessmen started to see that honesty might actually be profitable. In America, as John Mueller has shown in his wonderful book, *Capitalism, Democracy, and Ralph's Pretty Good Grocery*, P.T. Barnum—whom we all know as the victimizer of suckers—in fact pioneered modern ideas of customer service, while around the same time John Wanamaker was making fixed retail prices a new standard. And the end of the 19th century saw the creation of independent institutions like the Underwriters Laboratory and the Better Business Bureau, all of which were intended to foster a general climate of

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trust in everyday transactions. On Wall Street, meanwhile, J.P. Morgan built a lucrative business by assuring investors that companies with a Morgan man on the board were reliable and solid investments.

At the heart of this shift was a far greater emphasis on the accumulation of capital over the long run as opposed to merely short-term profit, an emphasis that is arguably a defining characteristic of modern capitalism. As Tilly puts it, businessmen started to see "individual transactions as links in a larger chain of profitable business ventures," instead of just "one-time opportunities to be exploited to the utmost." If your prosperity in the long run depends on return business, word-of-mouth recommendations and ongoing relationships with suppliers and partners, the value of fair dealing rises. The lubrication of commerce that trust provides became more than desirable. It became necessary.

The important thing about this new idea of trust is that it was, in some sense, impersonal. Reputation had, of course, been important as long as intergroup commerce had been around. But previously, trust had been the product only of a personal relationship—I trust this guy because I know him—rather than a more general assumption upon which you could do business. The real triumph of capitalism in the 19th and 20th centuries was that trust was woven into the basic fabric of everyday business. Buying and selling were no longer about a personal connection. It was now about the virtue of mutual exchange.

As it happens, the impersonality of capitalism is usually seen as one of its unfortunate, if inescapable, costs. In place of relationships founded on blood or affection, capitalism creates relationships founded solely on what Marx called the money nexus. But from a certain angle this impersonality should instead be seen as a virtue, because it advocates the fair treatment of people not on the basis of consanguinity or proximity, but just because they're, well, people. Capitalism, ultimately, widens horizons, because it makes the idea of trusting only people within your particular ethnic or geographic group seem outmoded. At its core, the system is cosmopolitan, since you should be willing to trade with anyone who can offer a good deal.

But it's possible that capitalism's impact was not limited just to making merchants treat one another fairly. The historian Thomas Haskell has argued convincingly that the rise of modern capitalism was instrumental in the emergence of what you might call the humanitarian sensibility, as exemplified by the campaign to abolish slavery in the British colonies. Historians have always noted that the key figures in the abolitionist movement of the late 18th and early 19th centuries were Quakers and that the Quakers were also, as we've seen, key figures in business at the time. Traditionally, this connection has been seen either as a historical curiosity or as an anomaly that had to be explained away via theories of "ideological hegemony" and "class interest." Haskell, though, suggests that the connection is not an anomaly and that it was logical that the people most enmeshed in the capitalist system would also be the people most likely to act to alter the lives of people living thousands of miles away, even though they had no personal relationship to them.

**As good capitalists, Quakers pondered long-term consequences.**

Haskell's point is not that being good capitalists made the Quakers saints. (Their religious convictions were clearly at the root of their abolitionist sentiments.) Instead he argues that being good capitalists made the Quakers more able to think about the long-term and long-distance consequences of their actions, and gave them what he calls "recipes for intervention." Humanitarianism depends on the idea that we are connected to—and, in some sense, responsible for—people who live a long way away from us and who have no familial or national connection to us. More than that, though, humanitarianism also requires a long-term perspective—you act now in the hope of achieving something in the distant future—and a faith that successful change is possible. Today we take all of these things pretty much for granted. But in the 18th century they were relatively new concepts, and the people who understood them best were businessmen.

Capitalism, after all, encouraged universalism over provincialism. It demanded a willingness to make and keep promises—often to strangers and foreigners—deep into the future. It fostered a sense of individual, rather than group, responsibility, and encouraged a more strict accounting of the relationship between action and consequence. And it also, as Haskell argues, widened the sense of possibility by demonstrating that people were able to rationally judge risk and reward and deal intelligently with problems that were thousands of miles away or years into the future. In the case of slavery this meant that instead of simply dismissing it as something irrelevant or unchangeable, the Quakers were able to see it as their problem and as a problem they could do something about.

The relationship between capitalism and humanitarianism is essentially invisible now: The ideas it

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depends on have become part of the background of everyday life. The same is true of the commonplace workings of a healthy capitalist system. I can walk into a store nearly anywhere in America and be guaranteed that I'm going to get pretty good service and that whatever product I buy—a product that, in all likelihood, will have been made in a country 9,000 miles away—will probably work pretty well. And this is true even though I may never walk into that store again. At this point we take both the reliability of the store and my trust in that reliability for granted. But in fact they're remarkable achievements. And without them the kind of economic growth and standard of living that Americans have grown accustomed to would not be possible. In the end a successful capitalist system succeeds because it makes people more trusting. It encourages people to believe that most transactions will go off without a hitch, not because of the law or possible sanctions, but because that's the way for everyone to prosper. When the system is working right, it creates a virtuous cycle, in which an everyday level of trustworthiness breeds an everyday level of trust.

Of course, we're still confronted with the reality of recent business crimes. If capitalism is actually a system that fosters trust and rewards good behavior, what went wrong?

Part of what happened was certainly a function of the giddiness of the bull market. Capitalism may rely on trust, but its motto is probably closer to "Trust, but occasionally verify." (We buy on Ebay, but we rely on the rati system, and we read *Consumer Repor* or CNET before buying that new DVD player.) And there's little doubt that stock market investors stopped bothering to verify because they were so intoxicated with the money they were making. At the same time, and more important, the self-organized institutions whose job is to verify—Wall Street firms and accountants—simply abandoned their roles as what economist Daniel Klein calls "independent knowers," sacrificing their reputations as providers of objective analysis in exchange for the fat fees that the companies they shilled for could offer them.

Perhaps the most important fact, though, was simply that the money to be made from sketchy or dubious behavior was so immense that the discipline imposed by the market vanished. At its heart capitalism works because success depends on repetition. My commitments are believable today because they need to be if I want to stay in business tomorrow. Even if you and I will never trade again, I treat you honorably because my reputation demands it, and because whatever gain I might reap from sharp dealing doesn't outweigh the possible damage to my future. And my experience as a businessman has taught me that fair dealing really is the best recipe for long-term success.

In the case of the executives at companies like Enron and Tyco, though, the short-term gains from self-interested and corrupt behavior were so immense—because they had so many stock options and because the boards of directors turned a blind eye—that any long-term considerations must have paled by comparison. In the case of Dennis Kozlowski, for instance, it's hard to see how he could have made $600 million honestly if he had stayed chief executive of Tyco. But dishonestly, it suddenly became possible (if the accusations against him prove out). Capitalism is supposed to be a non-zero-sum game, in that every transaction only takes place if both sides feel they're gaining—otherwise, the deal wouldn't get made. But in more than a few boardrooms in the late 1990s the game was zero-sum: The chief executive's gain was, ultimately, everyone else's loss. In that sense, someone like Kozlowski was not so much the archetypical capitalist as he was a kind of feudal lord, milking his demesne for all it was worth without worrying about the long-term health of his enterprise.

The problem, of course, is that though the scandals themselves will be short-lived, their impact will endure. When capitalism is working well it encourages people to trust one another; when things go wrong it encourages people to be skeptical and cynical. Some of that skepticism is appropriate. (If more investors had scrutinized balance sheets in the last decade, we'd all be better off.) But too much of it will throw sand in the wheels, raising the cost of capital and making everyday transactions more arduous and more expensive. The simple answer to what's happened on Wall Street and in the executive suites of America is, of course, the same answer that capitalism has proffered for the last 200 years: transparency. But along with that, corporations need to do a much better job of ensuring that the right things get rewarded. The history of capitalism shows the value of trust and fair dealing. But it's a lesson that capitalists periodically need to learn all over again. F

## If capitalism fosters trust and good behavior, what went wrong?

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# Pioneers Die Broke

**Inventive geniuses have a way of coming to bad ends, while their imitators amass fortunes.**

BY JOHN STEELE GORDON WITH MICHAEL MAIELLO

Gary Kildall created the first operating system for personal computers—nearly a decade before Bill Gates signed his epochal deal with IBM for MS-DOS. Gates went on to become the world's richest man; Kildall died in a brawl, scarcely remembered outside Silicon Valley for his seminal contribution. Dan Bricklin created the first spreadsheet program, VisiCalc, in 1979. After a costly legal spat with partner Bob Frankston, Bricklin sold out for less than $3 million to Lotus, which created a nine-figure fortune for Mitch Kapor from its VisiCalc imitation called 1-2-3. And even that killer app didn't make the really big bucks for its owners. The biggest spreadsheet fortune wound up in the coffers of Gates' Microsoft, whose 1-2-3 knockoff, Excel, is the market leader today.

Why is it that innovators die poor—while imitators succeed beyond all measure?

There are notable exceptions. Thomas A. Edison, an inventive genius but also a shrewd entrepreneur, was a founder of what became the General Electric Co. At his death in 1931 he left a $12 million estate, big enough to have put him on The FORBES 400 list, had it then existed.

But his rival and, some would argue, intellectual superior, Nikola Tesla, spent his last years feeding pigeons outside New York's Public Library, and died nearly penniless. With more than 700 patents to his name, Tesla invented radio, the coil transformer, wireless communication, fluorescent lights and the alternating-current motor, which allowed electricity to flow over long distances. He had about as much business savvy as a puppy; he might have been fabulously wealthy had he not signed away AC royalties to George Westinghouse and patent rights to a wireless broadcasting system to J.P. Morgan.

Indeed, the history of American commerce is replete with visionaries who couldn't turn their prodigious creations into commensurate bank accounts. Some were temperamentally unsuited to be ruthless businessmen. Maybe Bricklin is in that category. "I'm not rich because I invented VisiCalc, but I feel that I've made a change in the world," he said in 1985. "That's a satisfaction money can't buy."

Other inventors, like Charles Goodyear, were easy prey for crooks. "The history of invention," he wrote in the 1850s, "proves that whoever attempts by inventions to improve the conditions of others, usually impairs his own, except so far as he may add to his happiness from the satisfaction of having done good to others."

Goodyear was a dreamer, careless of his appearance and indifferent to

**John Steele Gordon** is the author of five books on U.S. business and a contributing editor of *American Heritage*.

Thomas A. Edison

Nikola Tesla

Charles Goodyear

Bill G

money. His obsession, of course, was rubber. The substance had been known to the Western world since Columbus brought it back on his second voyage, but it had no practical use until the 18th century, when it was found that rubber removed pencil marks from paper—the origin of the word "rubber."

In the early 19th century the Scotsman Charles Macintosh developed a process for making waterproof fabric by putting a layer of rubber between two layers of cloth. It was the first important use of rubber, and the misspelled "mackintosh" was soon in great demand in Britain's rainy climate. By the 1830s the head of Charles Macintosh & Co. was Thomas Hancock, the most important person in Britain's growing rubber industry.

A small rubber boom developed in both Britain and America as companies sought to utilize its remarkable qualities of elasticity and water repellency. But rubber had many drawbacks. For one thing it was smelly, a bit like the bottom of a compost pile. But far worse, it melted at high temperatures and became brittle at low ones. This was less of a problem in the temperate climate of England, but in the U.S. it was a fatal flaw. Goodyear decided that he was going to solve this problem.

For ten years Goodyear labored to find the answer. Time and time again he thought he had it, only to find that he had failed again. The hardware business he ran with his father went bankrupt, and he often found himself arrested for debt and thrown into jail. His family sometimes did not have enough to eat, but Goodyear soldiered on, turning the kitchen of wherever he was living into a laboratory, commandeering pots and pans, pawning the furniture when necessary to raise money to continue his experiments, borrowing from anyone foolish enough to lend to him.

In 1839 a happy accident gave him the answer. He had mixed rubber with sulphur and white lead, and dropped some on the kitchen stove. Instead of melting, it hardened. But Goodyear wasn't a trained chemist (the chemistry of rubber was completely understood only well into the 20th century). It took him several more years to find the right combination of rubber, solvent, sulphur, white lead and heat that could be turned into an industrial process.

Visions of wealth danced in Goodyear's head, but he made a fatal mistake. He sent samples to Thomas Hancock without filing for a patent in Britain, which has a strict first-to-file rule for granting patents. He thought the secret was safe and asked for £50,000—an enormous sum then—as the price of sharing it. But Hancock, deeply knowledgeable about rubber and its limitations, realized instantly the significance of Goodyear's achievement. He proceeded to steal it.

Reverse-engineering the samples Goodyear had sent him, Hancock filed for a patent in Britain in 1844, a few months before Goodyear, who had obtained patents in both the U.S. and France. But the British market—in the mid-19th century, the most important in the world—was denied to Goodyear.

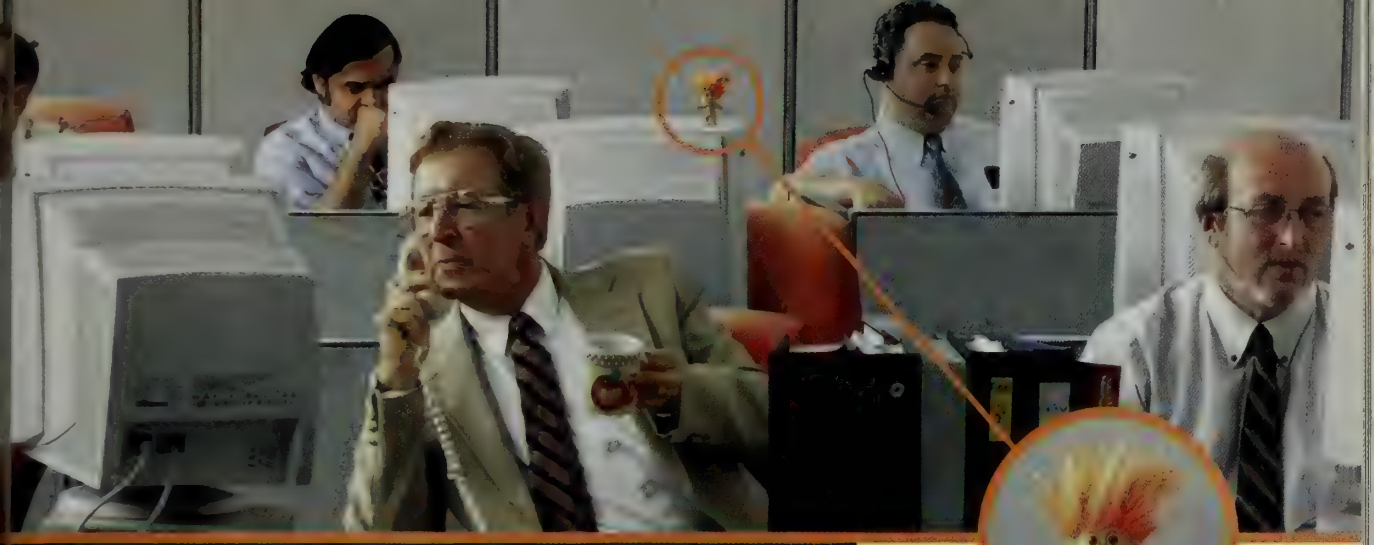
His brother-in-law paid Goodyear a flat fee of $50,000 for the American patent rights and founded what would grow into Uniroyal. The Goodyear Tire & Rubber Co., founded nearly 40 years after Goodyear's death in 1860, was only named in his honor. Despite its effect on the future of the world economy, all that Charles Goodyear's great invention earned him was immortality.

Gary Kildall maintained for years that Bill Gates had hoodwinked him when it came to winning the standard operating system for IBM, on the verge of introducing its first PC. At the least, he was outmaneuvered by a brilliant opportunist who, himself a software engineer of some prowess, could foresee future applications that may have eluded—or failed to interest—Kildall.

Kildall was more interested in solving problems than in scoring profits. A professor of computer science at the U.S. Naval Postgraduate School in Monterey, Calif., he convinced a fledgling Intel in 1972 to give him the prototype of its Sim-4 chip, which wouldn't be available to the public for another four years. Out of this collaboration came Kildall's Control Program for Microcomputers—or CP/M, the first operating system for microprocessors, which he sold to programmers. In 1976 Kildall and his wife, Dorothy McEwen, founded Digital Research International, to sell CP/M software and language compilers.

All the while Gates and Paul Allen were launching Microsoft and trying to adapt the Basic programming language invented by others in 1964 to the forerunner of the PC, the Altair 8800. By 1976 Gates had emerged as one of the most serious (and contentious) capitalists in the subculture of geeks who freely shared new ideas in a group called the Home Brew Computer Club, cofounded by Kildall. "Who can afford

Visions of wealth danced in Goodyear's head, but he made a fatal mistake.

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to do professional work for nothing?" Gates complained in an open letter to the club. He claimed he'd spent $40,000 in computer time developing Basic, but that, because only one in ten Altair owners paid for the software, his compensation amounted to $2 an hour. "There is very little incentive to make this software available to hobbyists," he wrote. "Most directly, the thing you do is theft."

The two software pioneers collided in 1980. That's when IBM launched its top-secret program, Project Chess, to develop its PC. It needed an operating system and, surely, CP/M would have fit the bill. But at the time Kildall was onto a new problem—building a compiler for a programming language called PL-1, designed by IBM.

What happened next is still a matter of dispute. IBM sent a team to Redmond, Wash. for help on Project Chess, according to Michael S. Malone's *Infinite Loop* (Doubleday, 1999). Why Big Blue stooped to little Microsoft, Malone suggests, is explained by the fact that Gates' mother, Mary, sat on the board of the United Way of America alongside IBM Chairman John Opel. After two meetings held under promises of confidentiality, IBM offered a hardware and software consulting deal. It wanted rights to a desktop operating system for a small sum; Gates was willing to oblige—on condition that he be given rights to sell copies to other computer makers for whatever the traffic would bear.

IBM also asked about CP/M: Could it buy the system from Gates & Co.? Gates explained that IBM would have to deal with Kildall and offered to set up the meeting. Gates' account is that he called Kildall and told him that "important customers" were going to visit and that he should "treat them right." A nondisclosure agreement prevented him from offering more detail.

Kildall disputed this account. He claimed Gates had not impressed on him the importance of the meeting—and so Kildall skipped it for another appointment in San Jose, leaving the IBMers in the hands of McEwan, who handled hardware accounts. She refused to sign a nondisclosure agreement without Kildall's knowledge, and so IBM left Digital Research without a word about Project Chess.

With Kildall's apparent default, IBM approached Microsoft for an operating system. It didn't have one. But Paul Allen knew someone who did: his friend Tim Paterson at tiny Seattle Computer Products—whose SCP-DOS, designed to run on the 8086 microchip, Gates bought for $75,000. Kildall was shocked when he learned that Microsoft had sold an operating system to IBM; he assumed he had a gentleman's agreement with Gates to provide CP/M to supplement programming languages like Basic.

IBM eventually got in touch with Kildall, report Stephen Manes and Paul Andrew in *Gates* (Touchstone, 1993). But Kildall, they speculate, was wary of signing rights over to IBM because it was his only product at the time. Moreover, he was unable to supply a price or a delivery date for the newest version of his operating system, the CP/M-86.

It ended bitterly. Kildall threatened to sue IBM over using Microsoft's operating system (renamed MS-DOS), which he believed had been ripped off from his own CP/M. To forestall legal action, IBM offered consumers the choice of either CP/M or MS-DOS. But at $240, six times the price of MS-DOS, CP/M was quickly headed for extinction. Kildall sold Digital Research to Novell in 1991. Three years later he died in a barroom confrontation with bikers.

Kildall may not have seen the implications of his software until it was too late. Other inventors fail to reap the rewards of their ideas since the very qualities that make them so creative—original thinking, obsessive concentration on one goal, detachment from everyday concerns—make it difficult for them to deal with the real, often cruel, world.

In 1967 Robert Kearns invented the intermittent windshield wiper, now standard equipment on automobiles. He took the idea to the Ford Motor Co. in hopes of selling the device. After several years of inconclusive talks, Ford began offering the intermittent wipers on various models but without licensing the invention from Kearns, who sued. He finally settled with Ford for $10.2 million and also won a suit against Chrysler but lost his cases against General Motors and foreign manufacturers. The mess dragged on for more than 20 years; with legal meters ticking along steadily, the lawyers ended up as the chief beneficiaries.

Spinning machinery developed in the 18th century rendered cotton cloth made from fiber cheaper than wool. But cotton remained expensive, because removing the seeds embedded in the cotton boll, called ginning, was extremely labor-intensive. A field hand could pick about 50 pounds of cotton bolls a day, but removing the sticky seeds from that much cotton took a single worker a full 25 days' labor.

Eli Whitney revolutionized the textile industry by inventing the cotton gin in 1792. But he never got really rich from the tool. It wasn't because someone stole his patent. Instead, the device

## Kildall threatened to sue, believing MS-DOS ripped off his own CP/M.

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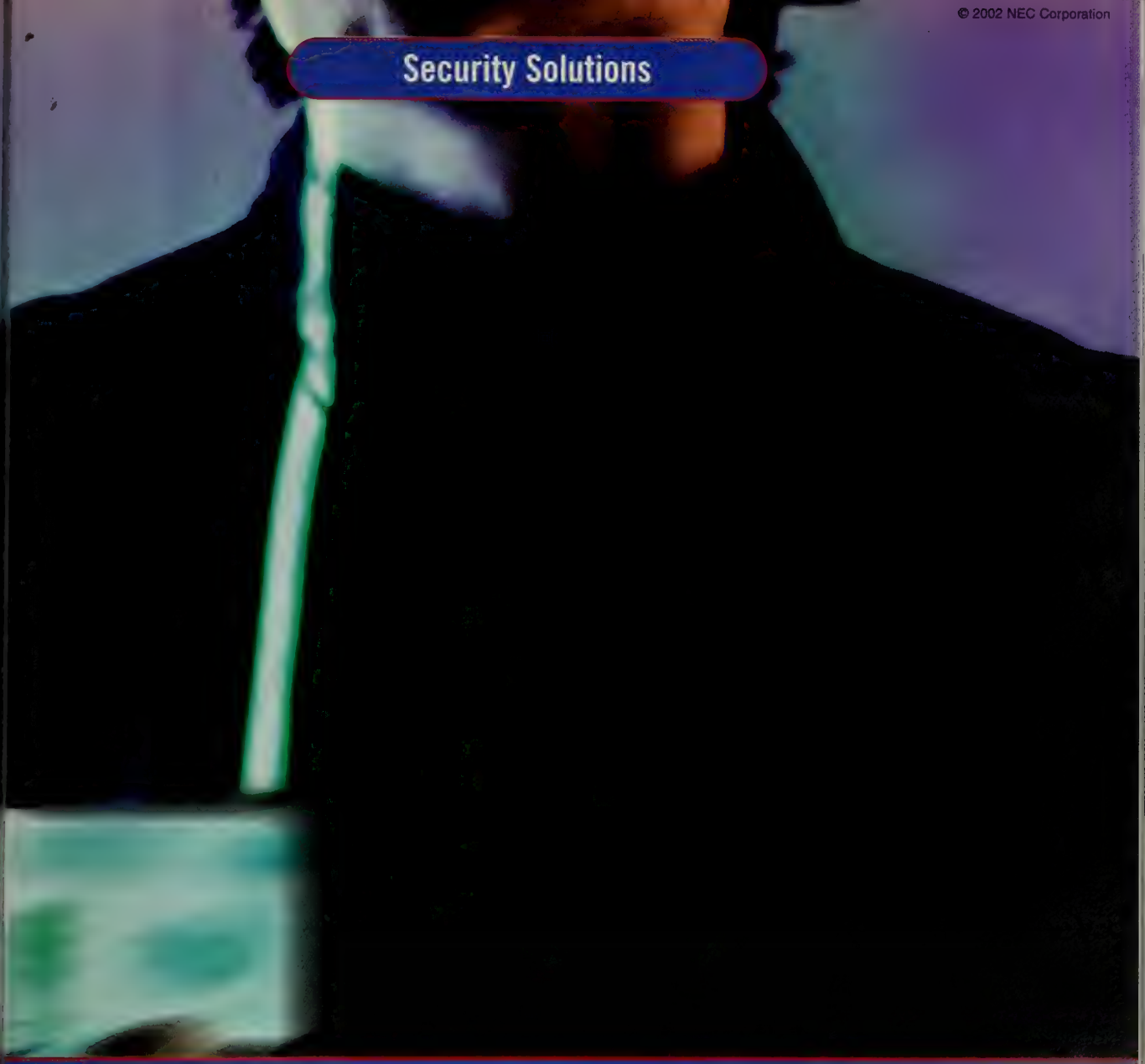



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was so simple that its patent was nearly impossible to enforce. The gin consisted of nothing more than a wooden roller studded with nails set half an inch apart. The nails pulled the cotton lint through a comb too fine to allow the seeds to pass, and a revolving brush then swept the lint off the nails and into a compartment. With the cotton gin a worker could clean 50 pounds of raw cotton a day.

With the labor component of ginning cotton reduced by a factor of 25, the price of cotton cloth plummeted and demand soared, driving the early Industrial Revolution in both England and New England. The American South turned out to be the best place on earth to grow the short-staple cotton that was best suited to Whitney's invention, and a vast cotton boom ensued. The U.S. exported 2 million pounds of cotton to Europe in 1794. By 1860 it exported 1.8 billion pounds, constituting more than half the dollar value of all American exports.

By the time Whitney received a patent on an improved version of the gin in March 1794, gins were already widely in use, easily constructed by any competent carpenter. Whitney and a partner set up a factory in New Haven, Conn. But the factory soon burned down and, while rebuilt, was unable to compete with nearly ubiquitous home-built gins. Much of Whitney's time was taken up with lawsuits seeking to enforce an unenforceable patent.

Edwin H. Armstrong already had two notable inventions—the regenerative and the superheterodyne circuits, which amplified radio signals—by the time he won a patent for a wide-band frequency modulation (FM) system (*see p. 138*). But he spent the rest of his life fighting the Federal Communications Commission for spectrum rights and RCA's David Sarnoff, who first ignored FM, then tried to buy out Armstrong and finally installed FM receivers in its TV sets without a license. Broke and despondent, Armstrong jumped from the window of his 13th floor New York City apartment.

Some of the greatest failures to exploit brilliant technologies have befallen not individuals but hidebound corporations. The award for signal ineptitude in this respect must go to Xerox's Palo Alto Research Center. Founded as a research division in 1970, PARC invented many of what are now regarded as the essential attributes of the personal computer: the graphical user interface, the desktop concept, files and folders, multiple windows, Wysiwyg word processing, the Ethernet, the laser printer and a more advanced version of the mouse. And yet, incredibly, Xerox capitalized on none of these inventions, because its managers were fixated on how to improve its photocopier business. PARC tried to incorporate some of its ideas into the Alto, a computer system that would have retailed for $17,000—had it ever come to market. Xerox left others, Microsoft and Apple Computer among them, to commercialize its discoveries.

A few dreamers have eventually been dealt a great hand—fortuitously. Scottish-born Alexander Graham Bell offered to sell his patent on the telephone to Western Union in 1876 for a flat $100,000. He was turned down; the company didn't think the device had much of a future. More fortunate still, Bell's father-in-law, Gardiner Hubbard, went on to found AT&T and to exploit Bell's creation.

One last happy exception: the story of Gordon Gould. This physicist, who worked on the Manhattan Project, had a classic eureka moment as he lay tossing in bed one Saturday night, Nov. 9, 1957. He had conceived of the laser (an acronym for "light amplification by stimulated emission of radiation"). He spent the rest of the night and the weekend writing a description, sketching necessary components and describing its many possible practical applications. He took his notebook to a nearby candy store where the proprietor, a notary public, witnessed it. According to Peter Franken, a physics professor at the University of Arizona, the notebook is incredible. "It's as if God came down and whispered in Gordon's ear and said, 'Listen, Buddy, this is what you're going to do.'"

> It took Gould 30 years to establish his priority in inventing the laser.

Gould, to be sure, was no 19th-century-style tinkerer when he invented the laser. He was a Ph.D. candidate at Columbia University, with access to major laboratory facilities. But he made a 19th-century tinkerer's mistake. "I was so ignorant of the whole patent procedure that I ... [thought] I had to build a model in order to get a patent." He didn't file until 1959, by which time scientists at Bell Labs had already beat him to it. Fortunately for Gould, American patent law favors the first to conceive, not the first to file.

It would take Gould 30 years and millions of dollars to finally establish his priority in inventing the laser and to be awarded patents on its major components. Only in 1987 did the legal dust completely settle. The good news, however, was that the delay made him far richer than he otherwise might have been. Had his patents been issued promptly and been uncontested, they would have expired before many of the most remunerative uses—from supermarket scanners and weapons systems to scientific instruments and CD and DVD players—had come to commercial fruition. F

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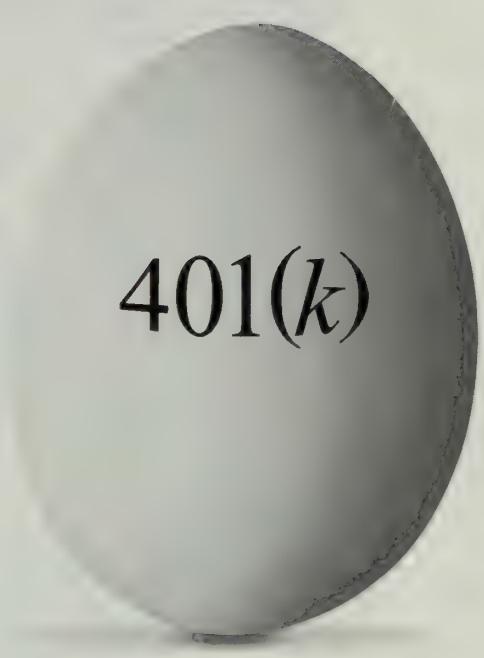


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# Storage Management

## Staying Afloat in a Sea of Data

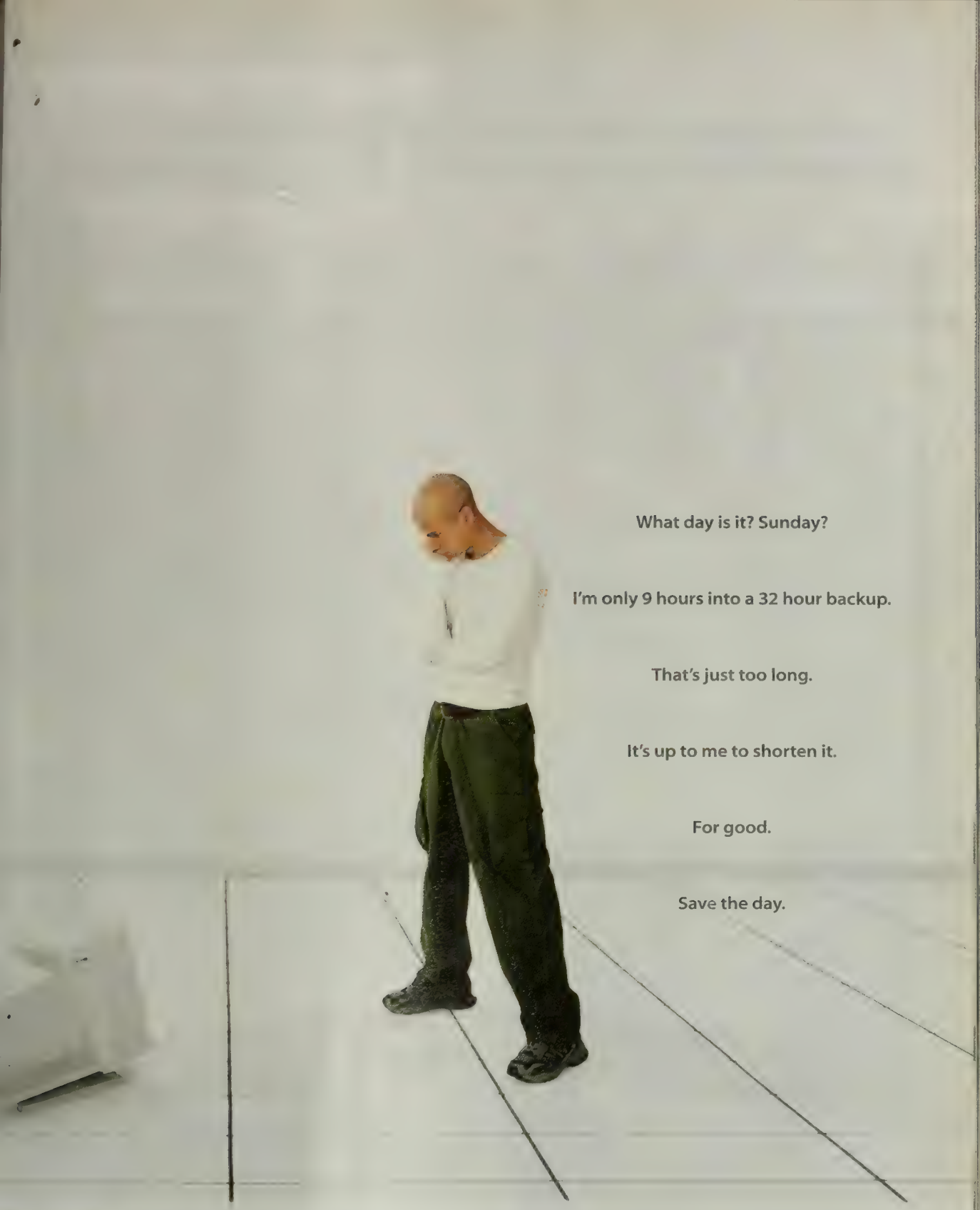
Data is the lifeblood of most enterprises, and the volume of data flowing through corporate networks continues to grow at a staggering pace. Once a minor concern, storage management is now a strategic issue. Many companies are now faced with the need to double their storage capacity every six to 12 months.

"If your storage systems let you down, the rest of your IT infrastructure becomes useless," says Anne Powell, research vice president at Gartner, a research and advisory firm. "Storage is fundamental, and its importance is growing in direct relation to the growth of e-mail, e-commerce, data warehouse and diverse rich-media applications."

Many companies are migrating to consolidated storage systems that use dedicated networks and high-performance switches to link a cloud of servers to a shared pool of storage. Ma aging consolidated storage systems is less expensive than ma aging multiple "islands" of storage on disparate hosts. The que for a more complete, integrated and efficient storage solutic has led many companies to adopt a data-storage strategy wi storage centralization and storage management at its center.

What's next for the storage industry? Many analysts say paradigm shift from storage as a resource to storage as a ut ity. Storage utility providers or storage service providers let cu tomers rent the storage capacity they need and bill them eve month or every quarter. A new study by IDC predicts th worldwide spending on storage utility services will reach mor than $1.2 billion by 2006.

Produced and written by Jerry Bowles • Illustrations by Eric Mueller

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## "If your storage systems let you down, the rest of your IT infrastructure becomes useless." – Anne Powell, Research Vice President, Gartn

"Coupled with the shortage of skilled IT professionals, the storage utility model, with its flexible pay-as-you-go approach, has become very attractive," says John McArthur, vice president, worldwide storage research, IDC. "It provides customers with storage solutions to ease the burden of storage management and enable them to respond to growth opportunities with predictable costs. That's essential as storage becomes an increasingly strategic issue."

### StorageTek

**Delivering More Capacity in Less Space for KeyCorp**

Many companies today find themselves inundated with data, but KeyCorp, one of the nation's largest bank-based financial services companies, found itself with an even more immediate problem. Its data center was literally running out of space for the storage hardware it needed to manage its approximately $84 billion in assets.

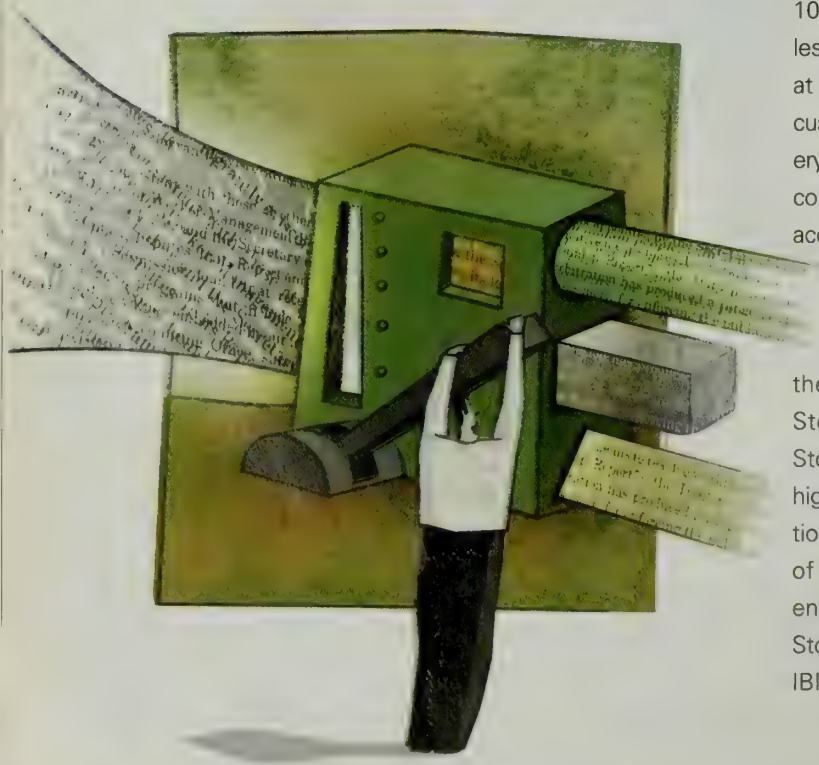
As the company considered the future of its data-storage environment, it looked for a solution that would meet its need for increased storage capacity while driving down costs and minimizing floor-space requirements in the company's data center. Key also needed a cost-effective storage solution f a new Mobius image archiving system that was being roll out to provide online access to checks, statements, loan app cations, reports and other documents that were historica stored in paper and microfiche formats.

At the time, the company was using an IBM Virtual Tap Server (VTS) that worked in tandem with eight leased Sto ageTek tape silos. With the leases approaching expiratio Key began studying options for its storage future and deci ed on a strategic storage direction that expanded the use virtual tape and high-capacity physical tape.

For a comprehensive solution that enabled it to make optim use of virtual tape and high-capacity physical tape, Key turne to StorageTek, a $2 billion worldwide company based Louisville, Colo., that delivers a broad range of storage solutio for digitized data. At the heart of the KeyCorp solution are tw new StorageTek Virtual Storage Manager (VSM) solutions, eac with 1.6 TB virtual tape subsystems designed to optimize batc processing, maximize tape utilization and free up floor space

Unlike traditional tape storage, which typically uses as litt as 10% of media capacity, StorageTek VSM uses the fu 100%. That means companies can store far more data in la less physical space. The solution allows users to retrieve dat at disk speed, which improves response time and improve customer satisfaction and includes a portfolio of disaster reco ery capabilities, like remote vaulting, for cost-effective busines continuity. IT managers can define data-management policie according to the enterprise's unique requirements.

In addition to the two VSM solutions, Key purchase four of the previously leased PowderHorn libraries an its previously leased TimberLine tape drives – product the company viewed as long-term investments. Throug StorageTek Financial Services, the company leased 6 StorageTek T9840A and T9840B tape drives for high-speed high-capacity data storage and retrieval. The StorageTek sol tion provided both a lower capital cost and a lower total cos of ownership compared with Key's previous solution. T enable Key to recover its existing storage investment costs StorageTek bought out the remaining value of the company' IBM VTS system.



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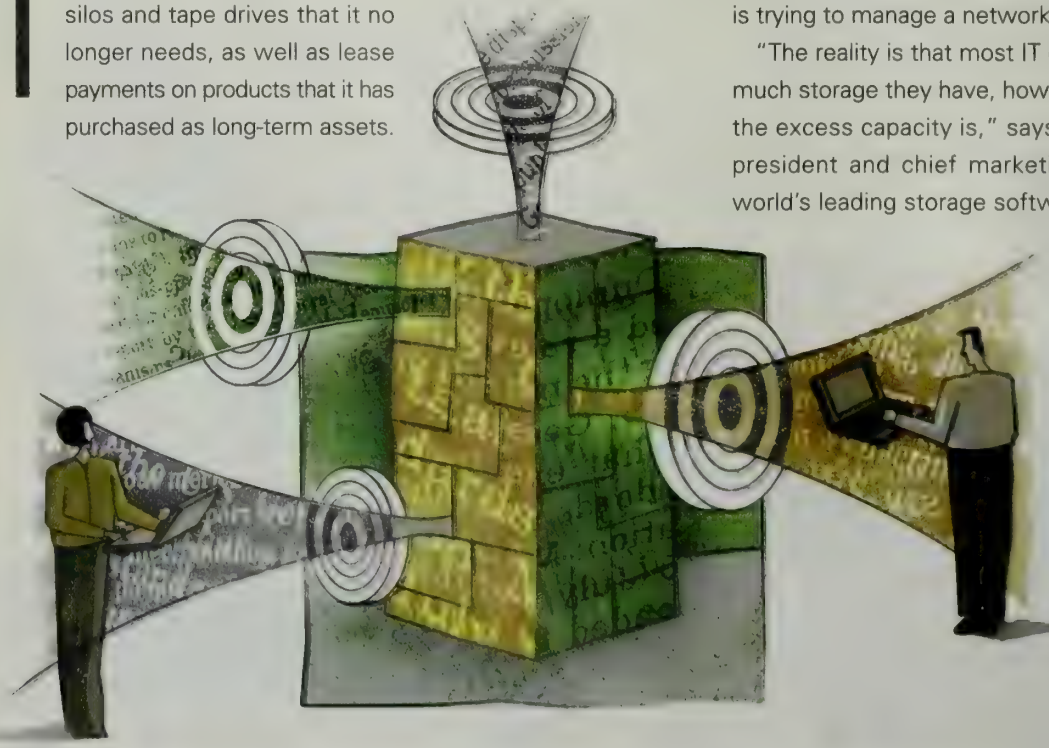
## "StorageTek offered us a technical configuration and a price we couldn't refuse."

**– Charlie Miller, Senior Vice President, Data Center Engineering and Operations, KeyCorp**

"StorageTek offered us a technical configuration and a price we couldn't refuse," says Charlie Miller, senior vice president of Data Center Engineering and Operations, KeyCorp. "They made it financially attractive to replace our IBM VTS with a StorageTek VSM solution. StorageTek's VSM technology and high-capacity tapes have helped us improve operational efficiency and save a large amount of floor space in our data center."

Content that used to be housed in eight tape libraries is now contained in four libraries, with ample free space to accommodate future growth, and the space savings have allowed Key to avoid expanding the size of its data center. The company has opened enough space to accommodate up to 15 new server racks to handle distributed applications, such as Web, file and print servers. The StorageTek solution gives Key the assurance that it can accommodate an additional 20 terabytes of data in its image archive over the next 18 months.

Key estimates it has reduced the total cost of ownership for its storage solution by $500,000 per year. These savings stem in part from a sharp reduction in the number of tape silos, tape drives and tape cartridges in its data center. The company is avoiding lease payments on tape silos and tape drives that it no longer needs, as well as lease payments on products that it has purchased as long-term assets.



Cost savings also stem from the gains brought by the automation of manual tape-handling tasks. Key estimates it has reduced its manual tape mounts by 50,000 cartridges per year.

## VERITAS

**Helping Enterprises Unleash the Storage Power Within**

Enterprises run on information. Without up-to-date, reliable and easily accessible data, no company can long compete in today's global business environment. That strategic need has created a boom in the market for storage hardware. The average customer will buy 100% more storage hardware this year than last, according to Gartner, which estimates that half of all IT budgets are spent on storage.

The irony is that most of these expenditures are unnecessary. At the typical large company, less than 50% of the existing storage capacity is actually in use. And, Gartner adds every dollar spent on new storage hardware requires $5 of additional IT resources to manage it.

Little wonder that with IT budgets shrinking and businesses still pinching every penny, IT managers and functional department heads are under growing pressure to get the most out of every storage resource. However, the problem is trying to manage a network they know little about.

"The reality is that most IT departments don't know how much storage they have, how much is being used or where the excess capacity is," says Jeremy Burton, senior vice president and chief marketing officer of VERITAS, the world's leading storage software company, providing data protection, storage management, high availability and disaster recovery software to 86% of the Forbes 500s. "Information is distributed throughout many applications, types of networks and storage hardware that were installed over the years to meet the needs of individual departments rather than the enterprise as a whole — the

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**"The reality is that most IT departments don't know how much storag they have, how much is being used or where the excess capacity is**
**– Jeremy Burton, Senior Vice President and Chief Marketing Officer, VERITA**

old stovepipe organization structure. If the HR department found itself running out of storage, the solution has traditionally been to buy a new disk. At the same time, another department — say, finance — might have capacity that is being underutilized."

A combination of spiraling costs, increasingly complex environments and accelerating amounts of data has created an imperative for companies to find ways to contain costs through more efficient access, management and use of existing storage resources. That has created enormous interest in storage software technologies such as "virtualization" and "Storage Resource Management" (SRM).

"Virtualization is one of the hot buzzwords of the storage industry right now," says Burton. "Basically, it is a technology that solves the inefficiencies of the stovepipe problem by allowing IT managers to view many physical storage devices from many different vendors scattered throughout the enterprise as a single large storage resource. Rather than managing a lot of disparate storage devices individually, virtualization lays the groundwork for creating and managing large pools of storage that can be allocated to different applications and departments as needed."

Storage virtualization is not a new concept. Host-based solutions, such as VERITAS Volume Manager, have been around for more than 10 years. But the increasing commoditization of storage hardware and the resulting complexity it has created within most enterprises has increased the focus on storage virtualization technologies and the cost-saving benefits they can deliver.

VERITAS is far and away the industry leader with 79.9% of the worldwide market share for volume management and virtualization software, according to the 2001 Storage Market Share Report from Gartner DataQuest. That's more than seven times the market share of its closest competitor.

The VERITAS approach to SRM, another storage software technology designed to maximize hardware resources and reduce costs, consists of an evolving set of tools that pr vide customers with an application-centric, consolidated vie of their heterogeneous storage resources. This insight allow customers to monitor and selectively manage storag resources with automated policies that ensure the availab ity of business-critical applications. By increasing the degre of management and insight, customers can accurately pr dict future storage requirements, thereby reducing capit expenditures by knowing when they need to buy hardwar and when they can hold off for a few months.

A key piece of the VERITAS SRM vision is SANPoint Co trol, which allows data centers to manage all the variou parts of the storage environment. Unlike competing SR tools that focus on reporting, SANPoint Control allows use to actively control and manage their storage resources, n just inspect them. It also provides such valuable capabilitie as hardware discovery, visualization, reporting, event har dling, policy management and a central administration poin for the storage network — all critical functions in helping I better manage existing storage resources and reduce costs

Next in the VERITAS SRM pipeline is a program called Glob Operations Management, which raises the level of manage ment from SRM to business-object management by helpin chief information officers understand their storage resource from the view of application and data availability, and how muc they are spending to store data in a certain location.

"What customers ultimately want is to be able to acces data much like they do other utilities, such as electricity," Burton says. "You simply switch on the light, and the powe is there. But for this to happen, companies must first get fu control of the storage resources they have. The VERITA portfolio of SRM and virtualization tools give them an auto mated, seamless and intelligent way to do that." ■

*The next Forbes special section on data storage will be in th June 23, 2003, issue. For information on how to participate, contact Charlie Cook at 203-637-1118 or Charlie_cook@snet.net*

## Storage Management Web Directory

**Storage Tek** www.storagetek.com **Veritas** www.veritas.com

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# Seeing the Light

**The display screens of tomorrow may be no thicker than a piece of paper and brighter than any laptop screen. RICHARD FRIEND thinks that's only the start for his supermolecules.**

BY SCOTT WOOLLEY

As microprocessors, hard drives and memory chips have raced along over the past decade, the means to display their data has crept slowly forward. That may be about to change, thanks to the biggest breakthrough in the visual display of words and pictures since the invention of television—a new technology that promises a world where information is portable, cheap and stunningly vivid. Just around the corner are roll-up screens that tuck into a pocket. A weapons inspector in Iraq could unfurl a map of his surroundings, fed with color-coded hints of nasty stashes and real-time satellite images. Stateside, such displays will make it easy to surf the Web or watch TV any place, any time, without having to lug a laptop.

The secret lies in harnessing organic polymers to function as pixels. And like many important discoveries, this one was born of a happy accident. In 1989, tinkering with materials he hoped would amplify electrical signals, Cambridge University physics professor Richard Friend and his graduate students were testing large organic molecules to see whether they were good insulators. The polymers were covered with a thin aluminum coating, but once fed electricity, they began to glow so brightly that light shone through the metal. Everyone in the lab was astounded, and by the afternoon dozens of people were trooping through to see the curiously luminescent material. "It's not often in physics you see a result staring you right in the face," says Friend. "There was a frantic scramble to understand why this was working."

Before he could crack that one, Friend was fixing on potential implications. Organic polymers are a fundamentally new way of converting electricity to light, a process at the heart of all displays—TVs, computer monitors, cell phone screens.

The last century has seen only a few major display innovations, among them the move from black-and-white monitors to color and the introduction of flat, liquid crystal displays to replace cathode ray tubes. If Friend's discovery lives up to its promise, the LCD will someday be tossed aside in favor of the OLED—organic light-emitting display.

While LCD screens have made major strides, they have two inherent problems: They gulp energy and are extremely brittle. A standard computer screen is the single largest drain on power—and the main reason laptops poop out after three hours of use. Today's LCDs are backlit; they work by filtering out different colors to produce a picture. By contrast, each point on an OLED screen can be fed electricity individually, so dark pixels waste no energy; each pixel also gives off more light than an LCD—with the same amount of electricity. OLED screens could extend the life of a laptop battery to ten hours, says Sidney Rosenblatt, a vice president of Ewing, N.J.-based Universal Display Corp., one of the dozens of companies, from IBM to DuPont, now pursuing OLED research.

Since OLEDs don't need to be sandwiched between glass, they can be

sprayed onto a wide variety of flexible surfaces, making them durable, flexible and cheap. That allows for roll-up screens; they could even one day be built into wallpaper or clothing.

In 1989, when Friend made his initial discovery, such talk seemed the stuff of cheesy sci-fi. "There was a whole community of doubters looking at their textbooks for inspiration, or perhaps I should say for lack of inspiration, and saying it couldn't be done," says Friend. "The science has been an astonishing story of the unexpected followed by the unexpected, and the unexpected has almost always turned out to be good news."

Example: The principles of standard quantum mechanics suggested that OLED screens could never be super energy-efficient. Only a quarter of the energy could ever be turned into light, the theory went; the other 75% would go to waste. With a little experimentation (and rethinking of basic physics), Friend discovered that the theoretical barrier was an illusion.

While Friend fought conventional wisdom in the lab, he waged a similar battle at Cambridge. In 1992 he convinced Cambridge to turn his breakthrough into its first-ever spinoff—to be known as Cambridge Display Technology—in which the university would get roughly a 20% stake in exchange for the lab's patents. It was a big step away from pure, basic research, sniffed some dons, but Friend argued it was the best way to drive his technology to market and fund improvements in the basic science along the way.

Still, the commercialization made this lifelong academic extremely nervous. "I wasn't sure that it was going to be a good thing for my career," he says. He needn't have worried. His original 1990 paper on glowing organic polymers, published in *Nature*, became Friend's most widely cited research, according to *Science Watch*, which tracks academic research. In 1995 Cambridge appointed him to the prestigious Cavendish professorship, whose list of past incumbents includes James Maxwell (1831-79), who created the theory of electromagnetic waves.

**And for my next trick: Organic molecules attaching to flexible screens transform a pen into a carrying case for a roll-up Web browser in this prototype. The display of information will never be the same again.**

Friend still faces challenges. A year before his discovery two U.S. scientists at Kodak made a similar finding. But their technology was based on the luminescent abilities of small organic molecules—single molecules—in contrast to the large ones—chains of molecules—Friend utilized.

There's a substantial difference. Small organic molecules won't dissolve in a liquid and so must be deposited onto a screen using a process similar to etching a standard computer chip. But because the screens are much larger than chips, that gets expensive. Friend's large molecules can be mixed into a solution and sprayed onto a screen, using the same technology as ink-jet printers. That potentially offers vastly lower production costs.

Kodak's small-molecule OLEDs, which make better use of current manufacturing technology, proved quicker to develop. The company is currently shipping 2.2-inch OLED screens, featuring bright colors and wider viewing angles, to partners who will be announcing products—likely handheld devices—in the first quarter of 2003. Cambridge Display dominates the large-molecule segment, having just acquired its main rival, a British firm called Opsys. It has licensed its technology to DuPont, Philips and Seiko-Epson.

Even more exciting, large organic molecules can be exploited in a reverse process—converting light to electricity—with potentially far-reaching effects. Solar panels that heat pools or power handheld calculators rely on silicon semiconductors to turn light into electrons. How much more efficiently could they be run if Friend's organic polymers replaced silicon? That's an open question. Many of Friend's papers have explored just that possibility. At the moment, organic molecules can't yet beat silicon in photovoltaics. But Friend envisions a time when the casing of a handheld computer or telephone will have one organic polymer that soaks up a room's light and uses it to juice a battery, which then powers one of his hyperefficient OLED screens.

Friend is casting his mind out even further. OLED could open new areas of art or, more prosaically, lead to a new kind of camouflage bodysuits, even constantly updated newspapers that look and feel like the original thing. "One always falls into the trap of going into the straight-replacement mode," he says. "But with a revolutionary technology you should not simply map it on to existing products. Not if you are an optimist." F

# Is your enterprise network on the right track?

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MOVING BUSINESS FORWARD

# The Secrets of Scent

## From the lowly nose, LINDA BUCK unravels the mysteries of how the brain works.

BY DANIEL LYONS

Imagine a bathroom in a subway station that isn't sickeningly smelly. Or drugs that keep cancer patients from losing their appetites or tinker with the wiring in your brain to help you overcome fear. Or a machine that can sniff out explosives with greater accuracy than a pack of police dogs. These things and more may grow out of the work Linda Buck is doing to understand the way our senses of smell and taste operate. Buck, an investigator with the Howard Hughes Medical Institute (HHMI), has spent 14 years trying to unravel the mysteries of the olfactory system.

"The first question," she says, "is how do mammals detect such an enormous variety of odors. The second question is how does the nervous system translate so many different chemical structures into different perceptions and behaviors."

Buck's first breakthrough came in 1991 when, as a senior postdoctoral fellow at Columbia University's College of Physicians & Surgeons, she and her mentor, Richard Axel, identified the genes that contain the blueprints for the receptors in the nose that identify odors. Working with rats, Axel and Buck pinpointed 1,000 types of "olfactory receptors" located in the back of the nose, on a spot called the olfactory epithelium. Receptors are protein molecules that sit on the surface of cells in the nose. They recognize scents by binding to molecules on particular odorants. Receptors work the same way in humans, though we have fewer of them—350 compared with 1,000 in mice.

In the geeky, fiercely competitive world of neurobiology, the identification of olfactory receptors was huge news. Scientists had been baffled for years trying to figure out how the humble old schnozz performs its miracles. "It was remarkable. They discovered something that for many years had remained a big mystery: How does the sense of smell work?" says Solomon Snyder, director of the department of neuroscience at Johns Hopkins Medical School in Baltimore. His lab had tried and failed to identify those same receptors in the 1980s.

What really blew people away, Snyder says, was the huge number of genes dedicated to odor detection. Of the 50,000 or so genes in the genome, nobody expected that 1,000 would be handling odor detection. "You're talking about 2% of the entire genome, all devoted to smell. It's incredible," Snyder says. "It still doesn't make any sense. Why have a thousand odor receptors? We don't know the real answer."

For Buck the breakthrough represented the payoff for three years of round-the-clock work in the lab at Columbia. "I was putting in 12 to 15 hours a day," she says. "Basically I just

got up and went to the lab, and stayed there until the wee hours of the morning. I only went home to sleep."

So what does Buck's breakthrough have to do with making public restrooms smell better? It's a bit speculative, but once scientists understand how receptors work, they can in theory use chemical agents to switch them on or off. Pump the subway station full of molecules that switch off the receptors that pick up nasty odors, and you can, in effect, neutralize an assault on your nose. "You can make antagonists to bad smells," Snyder says. "It's not that far-fetched."

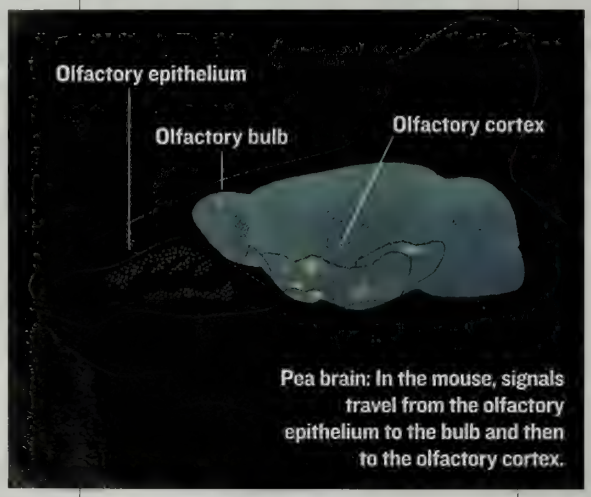
That's why International Flavors & Fragrances, maker of perfumes and other products, sponsored Snyder's lab for a decade and why Buck gets support from National Institutes of Health and the Department of Defense. One possible defense application: Identify the receptors that dogs use to detect explosives, clone them and create a bomb-sniffing machine. Scientists could block receptors to help obese people stop craving food. Or they could stimulate receptors to help anorexics and cancer patients start shoveling it down.

Buck will leave that work to others. She and her team are focused on the underlying biology.

In 1991 Buck left Columbia and set up her own lab in the department of neurobiology at the Harvard Medical School, where she and her team raced against Axel's lab at Columbia to figure out how all those receptors that she and Axel had identified actually work. In 1993 and 1994 Buck and Axel, working independently, produced reports that explained how the neurons are organized in the nose. There are about 5 million neurons in the olfactory epithelium, or about 5,000 neurons for each of the 1,000 different receptor types. Each neuron has a long fiber, or axon, that stretches upward through a tiny opening in the bone above it and into the olfactory bulb, a plum-size mass in the front of the brain, behind the forehead.

Another mystery the original discovery had left unsolved was this: How can humans, with only 350 olfactory receptors, distinguish 10,000 or more odorants? And how can we so clearly tell the difference between chemicals that on a molecular level are nearly identical?

In 1999 Buck deciphered a sort of alphabet, or code, in which each receptor detects more than one odorant, and each odorant can be detected by more than one receptor. Turns out receptors work together in an amazingly sophisticated "combinatorial code" to identify particular odors.




Pea brain: In the mouse, signals travel from the olfactory epithelium to the bulb and then to the olfactory cortex.

After cracking the code, Buck set out to trace the way connections extend from the olfactory bulb into the olfactory cortex, the part of the brain that processes odor signals. Using an ingenious genetic tracing technique, in 2001 two members of Buck's research team, Zhihua Zou and Lisa Horowitz, did something that had seemed impossible: They discovered a map in the olfactory cortex. "The first time I saw the map of the cortex—I remember just standing there, looking at it. I felt ecstatic," Buck recalls. "It was just so exciting and so beautiful to see it, after all those years of trying to understand this."

Buck's journey, which began in the nose, now reaches far beyond that—into higher cortical areas that control emotions and bodily responses. "We study the senses, but we're heading further and further into the brain," Buck says.

Her research represents just one piece of a massive worldwide effort being conducted to unravel the seemingly unfathomable complexity of the brain, with its billions of neurons and connections.

"Linda has made a wonderful set of contributions about the specificity of connections and the functional read-out both in the intermediate station and the cerebral cortex," says Eric Kandel, a university professor at Columbia and senior investigator at HHMI, whose research into the brain earned him a Nobel Prize in Physiology or Medicine in 2000.

Scientists still have a long way to go, however, before they figure out how the wiring works. "The brain is really a black box," Buck says. "Relatively little is known about the neural circuits."

Earlier this year Buck moved her lab to the Fred Hutchinson Cancer Research Center in Seattle, taking her seven team members with her. Their work might help scientists develop treatments for cancer patients. And Buck, who grew up in Seattle, was glad to move back after being away for more than 20 years.

Buck's work has also widened to include pheromones: chemicals released by animals that act on members of the same species to stimulate responses like fear and aggression.

Could the lowly proboscis someday lead scientists to create chemicals that might keep anger and violence under control? Or make widely available pheromone-laced perfumes that turn geeks into sex magnets and make zoo cages smell like rose gardens? It's not that big a stretch. F

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# Steely Dan

**DANIEL BRANAGAN imagines a world where knives never dull, cars can't dent and bridges stand up to earthquakes.**

BY LEA GOLDMAN

If the U.S. invades Iraq, American troops will confront an enemy force spread over roughly 167,000 square miles of mostly desert. Not just the Republican Guard or those nasty weapons stockpiles of Saddam. We're talking sand—an old adversary that recently reduced the operating lifetime of helicopter engines flying over Afghanistan from 2,500 hours to 80 hours. One H-60 Seahawk helicopter engine is removed daily and repaired at $110,000 a pop thanks, in part, to those little granules. Indiscriminately invading every nook of an engine, sand scrapes up the hardware, diminishes horsepower and jacks up fuel consumption.

Daniel Branagan, metallurgist, has an invention that may contribute to the solution to this nagging military problem—and potentially to many civilian problems as well. Having recently left a staff job at the Department of Energy's Idaho National Engineering & Environmental Laboratory, he is now in business on his own, developing a superhard steel that, applied as a coating to a metal surface, gives it four times the surface hardness of the best conventional steel alloys. The coating is a mere 20,000th of an inch—a bit more than a micron—in thickness, thus adding negligible weight to the metal.

Branagan's coating is one of the hardest metallic materials yet made, tougher than the hardest chrome/tungsten carbide alloy, the industry's most durable coating—until now. Put to the test last year, the superhard coating was applied to plates on a 20-ton mining rock-crusher and reduced jagged boulders to pebbles for 48 hours before wearing out. Any other coating would have lasted just one hour.

Creating gravel is the least interesting potential application. Among the future possibilities: bridges that won't buckle under severe seismic stress, a new generation of Frank Gehry-inspired forms of improbably twisted steel, car frames that can absorb the shock of head-on collisions and, yes, knives that may never need sharpening. Branagan has a new company—Nanosteel Co., based in Maitland, Fla.—and a powerful believer: The U.S. Navy has kicked in $1.4 million to try superhard steel on some of its 297 T700 Seahawk engines. It hopes that flying times will increase by at least 1,000 hours.

Ah, steel—once, long ago, the backbone of the American economy, now an enfeebled $72-billion-a-year industry seeking government protection. The metal is usually as wimpy as its producers. The hardness of conventional steel alloys is at best in the neighborhood of 1.4 million pounds per square inch. Branagan's steel goes to 2.2 million pounds per square inch already, and he thinks it could ultimately do better than double that. (Diamonds are several times harder still.)

Hardness is not the only virtue of what Nanosteel is setting out to produce. Stronger steel usually requires tradeoffs on other properties, like ductility, a metal's ability to be shaped into forms like sheets and wires. Branagan says he can increase the hardness and toughness of steel without a corresponding decrease in malleability. He did it by "tricking" molecules into ignoring their normal relationships.

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Steel alloys usually have orderly, lattice-like microstructures. Imperfections in the lattice are common and result in stress-induced wear and tear. But if you heat up the alloy until it liquefies—Branagan's powder must be heated to 1,200 degrees Celsius and applied with a thermal spray gun—it turns into an ashy powder as it cools, a metallic glass with "frustrated" molecules, as Branagan calls them, anxious to form a lattice, but confined by their inability to move. They give up, he says, and in the process form nearly defect-free structures that exhibit incredible bonds with the surface of the metal. These bonds are virtually unbreakable, leaving the coating more or less permanent. No sledgehammer can dislodge it.

There are skeptics aplenty. The search for tougher alloys, after all, dates to some time well before Homer's *Iliad*. Critics like Anthony DeArdo, a materials science professor at the University of Pittsburgh, dismiss superhard steel as impractical.

Whether DeArdo is right will be seen soon enough. General Motors has discussed Branagan's spray-on powder for auto bodies and parts as a substitute for heavier coatings. Lighter chassis, of course, mean more fuel-efficient cars. ExxonMobil is interested in prolonging the shelf life of drill bits, which wear out after only hours boring holes in the ground. Heavy-equipment manufacturer Caterpillar is eager to learn how to toughen up its bulldozers and tractors. "This is not five or ten years away," insists Branagan. "This is right now."

And, he says, it will be affordable. Branagan claims his atomized alloy will sell for $20-$25 a pound, roughly comparable to the cost of a tungsten-carbide coating, a common additive to tool bits. The spray-on metal powder is 50% to 70% iron. He's cagey about the other ingredients, but some of his scientific papers hint at carbon, tungsten and boron.

Branagan scored much of his $2.6 million in startup capital from his largest investor, Military Commercial Technologies, also known as Milcom, a Maitland outfit that licenses promising technologies from federally funded programs, among others. Nanosteel Co. plans to outsource superhard steel's manufacturing and coating process. Branagan, the company's chief technical officer, will continue to live in Bone, Idaho, renowned among residents as one of the last towns in the country to get phone service. He will oversee a team of metallurgists responsible for R&D on such other advanced materials as heavy-duty magnets. The U.S. Energy Department licenses the intellectual property rights for superhard steel to Nanosteel; Branagan is entitled to 30% of those royalty rates.

Boyish-looking at 34, with perpetually rosy cheeks, Branagan is prone to stumbling over his words when he discusses metallurgy, a field he thinks has been marginalized by more popular sciences like chemistry and physics. He still recalls with indignation a letter his wife received denying her credit toward a science requirement at Montana State University for a metallurgy course she had taken. "It's material *science*," he moans. Branagan has faced that kind of tunnel vision throughout his career, which began with an undergraduate degree in metallurgical engineering from Michigan Technological University in 1990. Before heading to Iowa State University for a doctorate, he enjoyed a three-month stint as a welding inspector at Finland's Oy Tampella Ab, a manufacturer of industrial parts.

At Iowa State he scored a research gig studying rare earth magnets at nearby Ames Laboratory, famed for its work on the Manhattan Project. The serious, often diffident student was a prime target for pranksters. One switched Branagan's samples of metallic glass with similar-looking Christmas tinsel. His adviser had to inform Branagan that his incredible discovery was available at the local supermarket. He was often surrounded by physics students, his work misunderstood or overlooked. The prestigious *Journal of Magnetism and Magnetic Materials* rejected his study of a rare earth magnet because it lacked physics-related measurements that Branagan and his adviser deemed irrelevant.

He had a tough time at the National Engineering & Environmental Lab in Idaho, too, winning a promotion just once during his seven years there. Branagan supplemented his research funding by squeezing money from the Pentagon's research arm and from the Navy. "When you start dealing with a senior bunch of scientists trained in conventional physics and they see a young upstart with a miracle material, most say 'no,' and they say it rather vehemently," says James Collis, who evaluates technology for the logistics division of the Naval Air Systems Command and who has closely followed Branagan's work.

**It turns into an ashy powder as it cools, a metallic GLASS WITH "FRUSTRATED" MOLECULES, anxious to form a lattice.**

Good thing Branagan breathes optimism. It will be at least a year before the Navy finishes testing superhard steel on its Seahawk engines. Branagan predicts that within the decade his new kind of steel will be available in sheets and solid parts, making its potential commercial applications infinitely greater.

Meantime, he's doing a little field testing on his own. On a recent trip to New York City, Branagan tucked a wallet-size slab of coated steel into his breast pocket—just in case of stray bullets. Crossing Fifth Avenue, cowboy boots clicking, he allows with a smile, "You never know." F

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# Mister Natural

## Japan's MASATSUGU TANIGUCHI is creating the first nonpolluting economy in the world—and trying to make a buck, too.

BY BENJAMIN FULFORD

Skipping stones across an inlet, the 64-year-old cement executive hardly seems like someone out to change the world. But Masatsugu Taniguchi aims to do exactly that. He is leaving Taiheiyo Cement Co. to start a new career on Yakushima Island, south of Kyushu, Japan, a place designated by the U.N. as a world heritage nature preserve. His mission: to create the world's first zero-emission, hydrogen-based economy—and to pull it off through no-nonsense business principles, not tree-hugging wishful thinking.

"I heard that Iceland was planning to switch its economy over to hydrogen, and I realized we could do it way faster on Yakushima," says Taniguchi. The 338-square-mile Yakushima makes a perfect test case. It is a steep granite island drowning in 320 inches of rainfall a year. That means it can, says the Agency for Natural Resources and Energy, potentially generate 233 megawatts of hydropower without having to build any dams bigger than 100 feet. Strong ocean winds are another potential source of energy. In addition to harnessing hydroelectric power from an existing 60-megawatt plant to make silicon carbide, used in various industries, Taniguchi realized he could make plenty of cheap hydrogen fuel with current technology.

Hydrolysis—running an electric current through water to produce hydrogen—yields fuel that is usually not economically competitive with other forms of energy. In Yakushima's case, though, there is a huge surplus of electric power that can't be stored or exported to the mainland; creating hydrogen and forcing it into tanks at 350 times atmospheric pressure makes economic sense. Such hydrogen can be exported in tankers, similar to those that carry liquefied natural gas. To set up the infrastructure, Taniguchi created a consortium called the Yakushima Clean Energy Partners (YCEP) and would like to gather $24 million from private investors, including automakers, other major companies and various municipalities.

That initial investment should provide the island's 14,000 residents with enough clean electricity to shut down its heavy-oil-powered generator in 2004. In the longer run, by 2020 or so, Taniguchi envisions that there will be sufficient hydro and wind power to supply 500,000 mainland cars with hydrogen. This will be a huge boon to the island's tourism industry, which employs 24% of the work force (fishing and forestry are also big here). Already 200,000 eco-tourists a year flock to see the island's towering 1,000-to-7,200-year-old cedars, phantasmagoric plant life and hordes of monkeys.

"It is a wonderful idea," says Yuji Kawaguchi, Honda's top researcher for future auto technologies. He says it's the best private-sector plan he has seen for a hydrogen economy. By contrast, he criticizes several U.S. and Japanese government hydrogen plans as being too geographically scattered. He has shown a strong interest in turning the island into a giant laboratory when the switch to fuel cell vehicles begins in earnest 10 to 15 years from now, as well

Slice of history: a cross section from an ancient cedar.

as in testing the safety of hydrogen gas stations, the long-term reliability of cars and the economic viability of fuel cells.

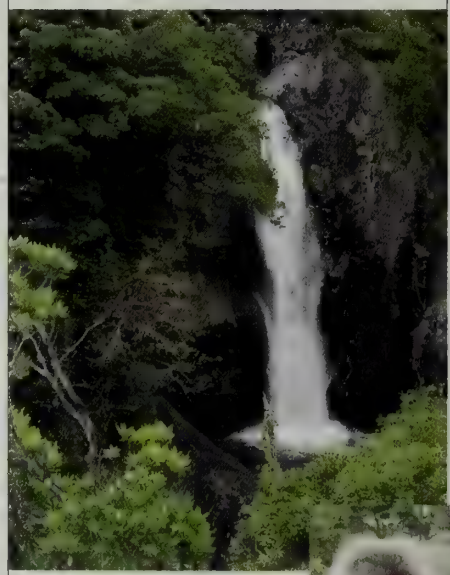
YCEP aims to be profitable from the start, initially by selling electricity to the residents and later by peddling hydrogen to automakers. Tourists who visit Yakushima will be required to ride hydrogen-powered buses. First, however, Taniguchi must get bureaucrats to loosen overall restrictions that prevent, for example, the importation of fuel cell buses that already meet European and American safety standards. The island is likely to be designated a special economic zone with relaxed hydrogen regulations within 2003, so that in 2004 the first hydrogen buses and cars will be running.

Toyota announced in July that within a year it would introduce 20 fuel cell cars. It is due to give four of them to the Japanese government as well as two to the University of California's Irvine and Davis campuses in December. The lease is $10,000 a month for 30 months. By 2008 the price should be somewhat lower—and many Yakushima residents, subsidized by the government, are likely to be driving them. By 2020 or so, depending on the progress of fuel cell technology, the last of the island's 9,500 gasoline cars will be gone and only water-vapor-emitting fuel cell autos will remain, according to Taniguchi's plan.

Can the Yakushima model be exported? It might make sense for vacation spots, like Kami Kochi National Park in the Japanese alps, that have an abundance of potential hydroelectric power. Imagining hydrogen-powered cars and buses in Yosemite and Yellowstone is a little more difficult, given the unpredictable snowfall and the fact that visitors to U.S. parks drive in from cities where gasoline remains the norm. Still, the city of Tokyo has already banned diesel cars (effective October 2003) and there is talk of eventually banning all hydrocarbon-based cars from the city center.

It will take visionaries like Taniguchi to bring the hydrogen economy closer, say realists like Masasuke Takata, a professor at Nagoaka University of Technology in Niigata, and to keep the public's expectations a few notches below the utterly impossible. Says he: "Ten years ago people were predicting hydrogen would be economical within a decade, but gasoline kept getting cheaper." He nonetheless believes that fuel cells are already making inroads, as combined heating and electric systems for large buildings. Within a decade, he says, if gasoline prices rise and fuel cell cars get cheaper, the switchover could begin.

Taniguchi has a reputation as an enviro-capitalist stretching back decades. Graduating from the Kyushu Institute of Technology in 1960 with a degree in mining engineering, he discovered there was no work underground, so he joined what is now known as Taiheiyo Cement. But he put his training to work, filling empty iron- and copper-ore ships with lime and selling it to mines that exported the ore (lime is used to neutralize acid used in mining). "As I visited mine sites around the world I began to feel with my own skin how seriously they damaged the environment and wondered if there was not a business opportunity here," he says. Taniguchi traveled the world in search of ideas that would both make money and reduce the damage caused by industry.



**Yakushima's waterfalls could be harnessed to help produce hydrogen. There are no such plans for the island's macaques.**

Realizing a lot of industrial waste contained ingredients that could be profitably recovered, he became an enthusiastic recycler of gypsum in Japan. Scrubbers used in thermal power plants, for instance, require limestone to capture sulphur from their exhaust. The reaction creates gypsum that can be sold to companies like wallboard makers. That particular variety of waste recycling is now common around the world, and Taiheiyo makes a big business of it.

Taniguchi was also inspired to use cement furnaces to aid in the disposal of household garbage. In Sweden he visited a plant where refuse is rotated in an unused rotary kiln for three days, allowing bacteria that thrive in that temperature to quickly degrade it into fertilizer and bits of plastic. "It smelled so bad that when I left even my underwear stank," he recalls. He realized that if the building were sealed and the foul exhaust pumped into a 3,600-degree cement furnace, the odor disappeared.

Taiheiyo was able to create a $375-million-a-year sideline in waste treatment with, Taniguchi says, a 20% operating margin. "If businesses start taking an offensive instead of a defensive attitude to environmental issues, then many opportunities appear," he says.

The practical side of this dreamer was forged early. Taniguchi was just 8 years old and just a mile and a quarter from ground zero when the atom bomb hit Hiroshima. Aside from losing his hair for a while, he was unharmed. The grisly experience, he insists, did not affect his views on the environment or atomic energy: "I just think that people are so scared of nuclear energy that power plants end up so over-designed for safety they are not profitable."

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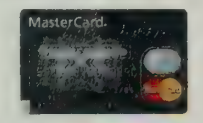


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# MANAGING WEALTH IN A TURBULENT ERA

BY LYNN MORRIS

What is the number one financial goal of the high-net-worth individual? To retire comfortably, acc ing to the annual Phoenix Wealth Management Survey commissioned by The Phoenix Companies,

During the long-running bull market, that goal seemed perfectly reasonable, yet in these days of market and financial volatility, a comfortable retirement now seems less assured. According to the survey, 34% of the respondents fear their money won't last through their lifetimes. "Obviously, the bear market has been a major influence on how they feel about their financial future," says Walter H. Zultowski, senior vice president of marketing and market research of Phoenix.

In reaction to clients' reservations, many investors have drastically changed their strategies. Playing a conservative investment game, however, can counter long-term financial goals. As an alternative, Phoenix relies on fundamentals to motivate "frozen" investors to get back to investing for the long-term. To do this, Phoenix suggests:

- **Undergoing a Financial Check-Up**
  Now is the time to reassess long-term financial goals relative to where a portfolio is today. Make sure all financial bases are covered, such as estate planning, retirement planning, income protection, assisting children and aging parents.
- **Take an Institutional Approach**
  Individual investors can learn from large pension funds and their disciplined approach to investing. Above all, develop an investment policy statement, which lays out the investment strategies and asset classes needed to achieve long-term goals. Just as pension funds regularly shift assets when they fall out of line with targets, individuals should periodically rebalance their allocations, especially during extreme markets.
- **Tackle the Bear With a Pro**
  An experienced financial advisor can offer not just good advice, but emotional support and the courage to stick to an investment plan in a down market. To find an advisor, ask for referrals from family, friends or business associates with similar financial needs.

## A New Need for Advice

It is not surprising that this sudden sense of insecurity over their personal finances has led many wealthy investors to actively seek professional financial advice. Amid the exuberance of the long-running bull market, high-net-worth individuals grew confident in their knowledge about general financial issues, including investments, savings, credit, etc. Shrinking portfolios have since eroded that confidence. The Phoenix survey found that only 55% feel very or fairly knowledgeable about s market activity — a drop from 64 2000. Only 45% are now making m and investment decisions without sulting professionals compared 51% in 2001. In addition, 27% of who do not currently have a formal ten plan believe they would benefit having one.

Clearly, high-net-worth indivi are looking for more support from financial advisors. In a reflection o times, The Phoenix Companies — w have served the affluent and net-worth markets for more tha years — are working to make clients revisit their financial goals, re their portfolio and develop an appro recovery strategy to keep them on for achieving those goals. "We us market intelligence we collect fro survey to tailor products and ser that support our advisors and distrib partners in meeting the complex changing needs of their wealthy clie says Zultowski.

By keeping a cool head and stic to basic investing strategies, you weather the bear and get back to ac ing your long-term financial goals.

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# Plastic Man

**BOB LANGER is an architect in plastic whose remarkable work may one day let you grow a new heart or replace a bone.**

BY MONTE BURKE

Robert S. Langer, a trim 54-year-old man with a crooked smile, maintains a relatively tidy office. Compared, that is, with the clutter of microscopes, culture dishes and bleary-eyed postdoctorates on the third floor of the Whitaker Health Sciences Building at the Massachusetts Institute of Technology. His science was behind the popular Internet download a few years back of a new human ear grown onto the back of a mouse, a photo that turned the collective stomach of a public still queasy about biotechnology. "The publicity wasn't so great," says Langer, thoughtfully twisting and pulling at a stray strand of hair. "But the science behind it, that was fine."

Langer, the Kenneth J. Germeshausen Professor of Chemical and Biomedical Engineering at MIT, is a founder of the budding field of tissue engineering—of restoring, maintaining and improving tissue by growing it, in vitro, on a biodegradable polymer (plastic) scaffold. The same science that grew an ear on a rodent's dorsal could one day save the 6,200 people in the U.S. who die every year awaiting transplants of organs like the liver, heart and lung. Or the 2 million Americans who need bone and cartilage reconstruction each year. It could allow people with damaged vocal chords, like Julie Andrews, to sing—or help people like Christopher Reeve walk again.

The concept is amazingly simple: A polymer scaffold is designed in the shape of, say, an individual's liver. Cells are harvested from a stem or donor, or ideally the host, and placed on the scaffold. There, in a tightly controlled environment, they regenerate and create a new natural liver. The organ is implanted, blood vessels regenerate and the scaffolding degrades away until it is nonexistent. The procedure has worked in rats, but it must undergo some tweaking before human trials can begin. (The procedure has received approval from the Food & Drug Administration for human skin; clinical trials for cartilage and a few other tissues are under way.) "It's plausible to think that in this century, many structures in the human body will be able to be replaced with living tissue that's virtually identical to the normal healthy tissue," says Langer.

He came to biomedicine as an outsider. Langer was trained as a chemical engineer, and his celebrated work has come at a time when huge strides in medicine—like the bumped-up potency of drugs—have coincided with advances in materials. Working at this crossroads has enabled him to make huge leaps in the field of drug delivery systems and to design biodegradable polymers on which human tissue can grow. But if he had followed the whims of his generation, Langer might not have entered the field of medicine at all.

Born the son of a liquor store owner in Albany, N.Y., Langer attended Cornell University, then got his doctorate in chemical engineering at MIT in 1974. Because of the oil crisis, most of his peers went to work for big oil companies. (Langer himself received four offers from Exxon alone.) "But I

thought I could make a bigger impact elsewhere," he says.

Judah Folkman of Harvard Medical School, one of the world's leading cancer researchers, gave him that opportunity. Folkman came up with the breakthrough idea of trying to choke off tumor growth by blocking angiogenesis—the development of blood vessels that a tumor needs to grow and metastasize. Langer, he says, "thinks far ahead and uses good science to get there."

**When he stitched a piece of regenerated spinal cord onto a paraplegic rat, IT WAS ABLE TO WALK, albeit with a slight limp.**

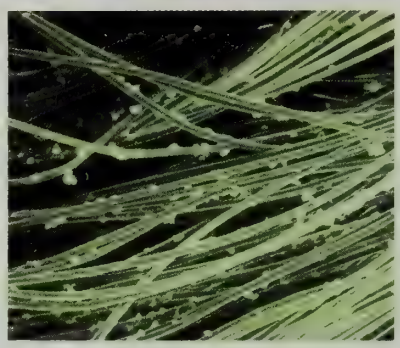
At the time Folkman was interested in finding a plastic that would allow proteins to be released at a slow and precise rate, mimicking the action of a tumor. Within a year Langer had invented a new plastic that used proteins to burrow holes big enough to release multiple drugs and cancer-fighting chemicals into the body. At the age of 27 he had filed for the first of his eventual 300 patents and helped spawn what is now a $20 billion-a-year U.S. industry that includes products like nicotine patches and coated cardiovascular stents.

Langer's ideas were ahead of their time. From 1977-78 he submitted nine separate proposals for research grants—including work on the controlled release of cancer drugs and the inhibition of angiogenesis—but was rejected by the National Institutes of Health and various foundations. "Peers reviewed my ideas and didn't like them because they weren't in the textbooks," he says. He persisted and eventually became a full-time assistant professor at MIT.

His work in drug-releasing polymers eventually led to the creation of a novel way [illegible] In the past, because of the blood-brain barrier in the skull, do[illegible] forced to overwhelm patient[illegible] with cancer-fighting drugs tha[illegible] or destroyed the liver [illegible]

Langer designed a dime-size plastic wafer inserted into the brain during tumor removal. The degradable wafer released chemo drugs directly into the brain without affecting other areas of the body. It became the first new brain cancer treatment in 25 years when the FDA approved it in 1996. (While MIT owns the patents on his inventions, Langer gets a piece of the royalties.)

Like many creative thinkers, Langer sometimes gets ideas from way outside his areas of expertise. In the early 1990s he saw a PBS program on the microprocessor and Intel and hit upon another notion: Why not design a microchip for drug release? The result is what he calls a "pharmacy on a chip." The thumbtack-size silicon chips have hundreds of reservoirs on one side that hold the drug (or drugs); the other side contains the circuitry that regulates release. The instructions could come from the outside—like a computer that acts as a garage-door opener—letting the drugs out of the reservoir. Or they could be preprogrammed, with the instructions embedded in, say, a patient's wristwatch. Eventually there could be drugs activated by the patient's own body, with, for instance, a chip that could sense when a diabetic has high levels of glucose and release the required dose of insulin.



**Getting a big lift: liver cells growing on degradable polymer scaffolding.**

These chips are now in animal trials, and Langer's goal is to begin testing on humans in two years. "It could usher in an era of very personalized medicine where, based on the smart delivery system, one pill could take care of many different things for an individual," he says. This year Langer was awarded the Charles Stark Draper Prize, a sort of Nobel Prize for engineering, for his lifetime of work in drug delivery systems.

His thoughts these days are trained on organ regeneration. Langer envisions a time in the future when tissue banks are full of hearts, lungs, livers and pancreases, all grown on polymer scaffolds from stem, donor or host cells. When a patient needs a donation, the organ could be cut to form, put in a FedEx box and delivered to the hospital. The tissues also could be engineered for cartilage, ligaments, blood vessels, intestines or spinal cords.

"Bob is the top of the top in tissue engineering," says Bruce Hamilton, director of bioengineering and environmental systems at the National Science Foundation. "And he's also one of the field's principal educators." At the MIT lab that's named after Langer, where 60 graduate students and postdoctorates are working on his ideas, one has produced heart muscle that, in vitro, actually pulsed. Another has made a bio-rubber to enable the more elastic tissues of the body, like blood vessels, to be grown. A third group of researchers is working on "smart materials" that change shape according to temperature and could be used as sutures that tie themselves during a minimally invasive procedure.

But perhaps most amazing is his work involving yet another rodent. Last year Langer and his group snipped a piece of its spine, rendering it paraplegic. He then took brain stem cells from another rat and grew part of the spinal cord on a polymer scaffold. When he stitched the piece of spinal cord back into the rat, it was able to walk, albeit with a slight limp. He has a video of the procedure. But don't look for it on the Internet anytime soon. F

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# Millions Served

**While the West debates the ethics of genetically modified food, FLORENCE WAMBUGU is using it to feed her country.**

BY LYNN J. COOK

Civil war in Angola and Sudan and drought in Eritrea mean that the continent is on the brink of another mass famine like the one that swept Ethiopia in the early 1980s. Florence Wambugu knows the kind of hunger that swells the stomach and dulls the eyes. She grew up with it. Now she has the makings of a cure. Wambugu was born in 1953, just a few miles away from Treetops, Kenya's famed game reserve. (That was the same place where, a year earlier, England's Elizabeth II was on holiday when her father, King George VI, died during the night and she awoke as queen.) But proximity to the posh highlands resort and the titled travelers who lodged there didn't spare Wambugu and her nine brothers and sisters from going a day or two at a time without eating. When Kenya's colonial government crumbled in 1963 Wambugu's father was rounded up—like so many young men—and trucked off to work on a white settler's farm. That left her mother and ten kids to scratch a life from the land. They stayed alive on sweet potatoes, a rich source of calories, vitamin A and beta carotene.

"The sweet potato is a woman's crop, a security crop," Wambugu says. "If we didn't have sweet potatoes, we had nothing." But pests love it as much as people need it. Growing underground, it is prone to infestation by the feathery mottle virus and worms. Africa's year-round tropical temperatures offer no winter to freeze off disease cycles, so each year nearly half the sweet potato crop fails. In Africa the sweet potato harvest averages two and a half tons an acre; the global average is more than twice that. African yields rank dead last in every major crop harvested, from corn to cotton.

Today the dismal yields are improving, thanks to Wambugu's decade-long effort to genetically modify crops to withstand pests. Into the sweet potato she has spliced in a gene from the pyrethrum, a white flower whose ingredients are fatal to insects and the feathery mottle virus.

This shuffling of genes is a hit-and-miss, years-long affair. First Wambugu isolates the gene that codes for the production of insecticidal pyrethrins in the pyrethrum flower and extracts them. [illegible] of thousands of copies are made and mixed together with tungsten balls just one [illegible] eter. Thousands of genes stick to each ball, and the combination is loaded into a [illegible] which consists of two small stainless steel chambers and a vacuum pump. Using co[illegible] the gun shoots the microscopic gene-bearing balls into sweet potato leaves. So[illegible] migrate off the tungsten and into the nuclei of the leaves' cells, and are

GUY STUBBS FOR FORBES

absorbed into the collection of DNA that defines the plant.

It was a breakthrough 25 years in the making. From the time Wambugu entered the University of Nairobi's plant pathology program as an undergraduate in 1975 until she earned her Ph.D. in plant virology from the University of Bath, U.K. in 1991, she tried various conventional hybridization techniques to outbreed the viruses that wipe out the otherwise drought-resistant and energy-rich tuber. Nothing worked—nor did her experiments over a decade-plus at the Kenya Agricultural Research Institute. Then, in 1992, the U.S. Department of Agriculture offered her a grant to study transgenetics in St. Louis in collaboration with Washington University and Monsanto, the agrochemical giant. For three years Wambugu labored in Monsanto's

**The evils of weevils: Wambugu's transgenic work could help promote a bumper crop of healthy—over virus-infected—tubers.**

labs, trying to splice genes for viral resistance into the sweet potato. It took another two years to test the transgenic tubers in greenhouses and yet another two years to obtain the necessary permits from Kenya to plant the crops for field testing. Now halfway through field trials, the results are astonishing.

The sweet potato is sub-Saharan Africa's first genetically modified crop, and its yields so far are double that of the regular plant. Potatoes are bigger and richer in color, indicating they've retained more nutritional value. On a continent where population growth outstrips food supply growth [illegible]

year, Wambugu's modified sweet potato offers tangible hope. According to the World Bank, biotech crops could increase food production in the developing world by 25%.

Wambugu overcame long odds even to get the education she needed for this venture. When she was 13, with food scarce and every child's hands needed to work the family plot, her mother sold the family cow to pay for Wambugu's boarding school 10 miles away. Her mother needed a dispensation from the village council to sell the animal; most thought she was crazy for educating a daughter when it would be easier to marry her off.

**When she was 13, with food scarce, HER MOTHER SOLD THE FAMILY COW to pay for Wambugu's boarding school 10 miles away.**

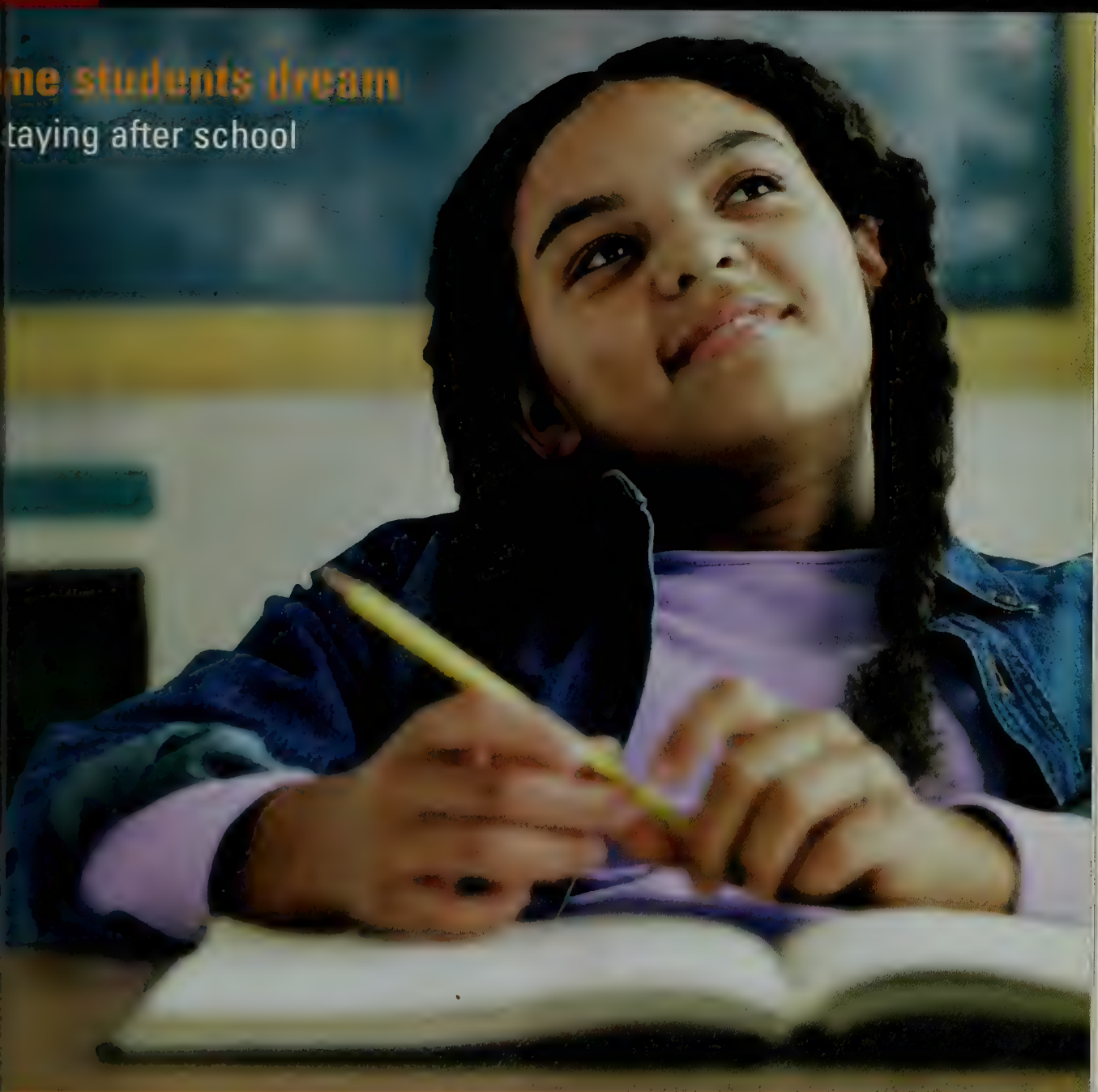
Today Wambugu, who lives and works in Nairobi, faces a different sort of obstacle. Groups from Greenpeace to the Union of Concerned Scientists fret that Africa is being manipulated by multinational corporations, in effect serving as one big—and potentially dangerous—genetic experiment. Some Africans are so freaked by plant technology that Zambia's government would rather have its citizens starve than accept donated food that includes genetically modified corn. Concerned with the misunderstanding about transgenic corn, Wambugu created A Harvest Biotech Foundation International to serve as a pan-African voice on the issue.

Wambugu concedes that GM crops are experimental but insists the potential good far outweighs the risks. It's like penicillin, she says. Some people are allergic to it, but the medicine has cured far more people than it has hurt. "This is not a question of export to Europe or America," she says. "If they don't want it, they don't have to have it. We have local demand. We're dying, so can we eat first?" Her former boss, Cyrus Ndiritu, former director of the Kenya Agriculture Research Institution agrees. "I would like to make something very clear. It is not multinationals that have a stranglehold on Africa. It is hunger, poverty and deprivation. And if Africa is going to get out of that, it has got to embrace GM technology."

If tissue-culture technology, a predecessor to genetically modifying organisms, is any indicator, the payoff for Africa could be huge. Wambugu won the World Bank award for global development in 2000 after introducing the tissue-culture banana to Kenya. In this process a piece of tissue is cut from a healthy plant and grown in a sterile environment into several plantlets that root in pasteurized soil before being transferred to the field. It turned what was once a subsistence crop into a major income earner for women farmers, more than doubling average banana harvests to 20 tons per acre.

Wambugu's next challenge is getting the funding to help Kenyan farmers pay for the modified sweet potato and tissue-propagated banana plants. To that end she is working with government researchers to loan out $15,000, with a repayment rate of 96%, but has no great benefactor on the horizon.

That has not deterred her from her next project: reforesting acres stripped by those in search of firewood. F

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# The Titan of the Teensy

**CHARLES LIEBER wants to wire up the future in a multitude of cheap, tiny devices.**

BY ELIZABETH CORCORAN

Charles Lieber wasn't supposed to end up at Harvard University. The school turned him down for a teaching job 15 years ago, and he still recalls the two-line rejection letter he received. But the young chemist, who never liked doing things the way everyone else did them, finally landed the job four years later.

These days Lieber, 43, holds a chair in Harvard's chemistry department. He and his team of 24 graduate students are the world's leaders in building "nanowires," whiskers of semiconductors so thin you could bundle 20 million inside a strand of 2-lb.-test fishing line. There is might in such minuteness. Much as the transistor was the fundamental building block of modern electronics, nanowires could similarly transform the way we live—starting with infinitesimally small sensors that scan the environment for invisible toxins to devices that monitor a diabetic's blood or check a cardiac patient for arrhythmia. They may also be instrumental in the next generation of almost-invisible computational devices, ones so small and cheap they could be woven into your clothes.

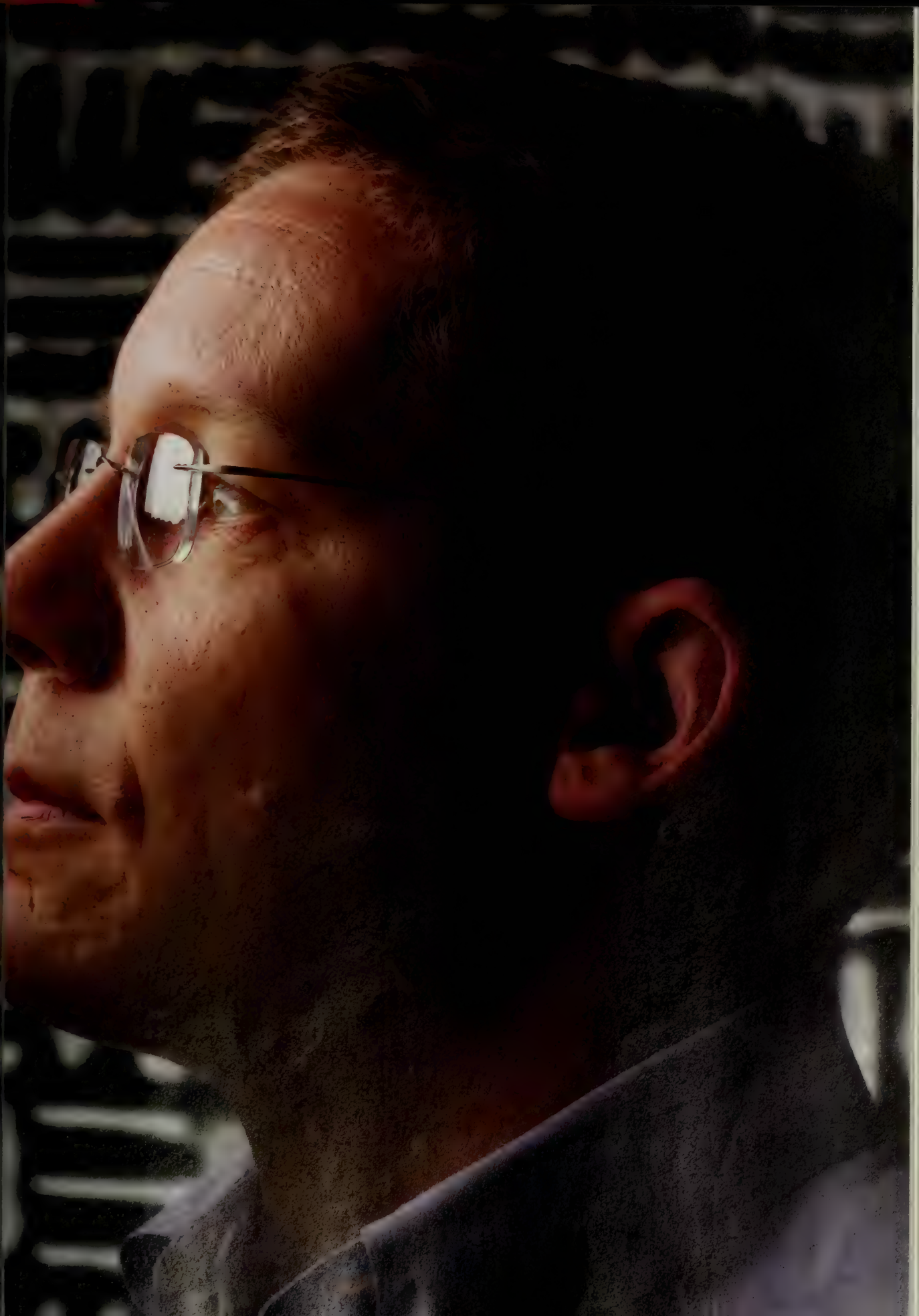
This should be sweet for a guy whose fourth-grade teacher had her doubts about him: Charlie will either achieve something of consequence—or end up in jail, she told his parents. But he is still seeking a greater win. As recently as two years ago, Lieber says, "I thought building a nanocomputer chip was sort of a joke. Like, yeah, you're gonna build a 16-kbit memory. You get money from DARPA [the Defense Advanced Research Projects Agency]. Yeah—wink, wink. There were so many gaps in the process. I like to deal in realism."

But the reality has become startling. After decades of research, nanotech is primed to burst into real products in the next two years. Broadly speaking, nanotechnology describes work on materials whose critical dimensions are measured in nanometers, or one-billionth of a meter. It promises to bridge the world of molecules with the "macro" world that the rest of us inhabit. "As a synthetic chemist, I could make any molecule you want," says Nathan Lewis, a professor at the California Institute of Technology. "But I don't know how to connect the molecules."

Lieber and others are trying to turn molecules into useful systems, from sensors to integrated circuits. "Charles Lieber is showing at the nanolevel actual transistors. That's extremely important," says Philip Kuekes, a leader in quantum science research at HP Labs, which is pioneering a competing approach to building nanoscale memory chips.

Lieber is uncomfortable with praise, restless to do better. "I'm really searching for ..."—he pauses, picking his words—"for a way of impacting more ... more than a narrow community of scientists."

As a teenager he was more of a tinkerer than a talker, winning national competitions for building and racing



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model planes. When he entered Franklin & Marshall College in Lancaster, Pa., his parents nudged him toward premed. The interviews for med school were uncomfortable for the taciturn Lieber. But chemistry had been fun. On a lark, he applied to graduate school at Stanford University. He was a restless student, dropping one area of chemistry research for another, searching for a question that was big, important—and untouched. (He received his doctorate in chemistry from Stanford in 1985.)

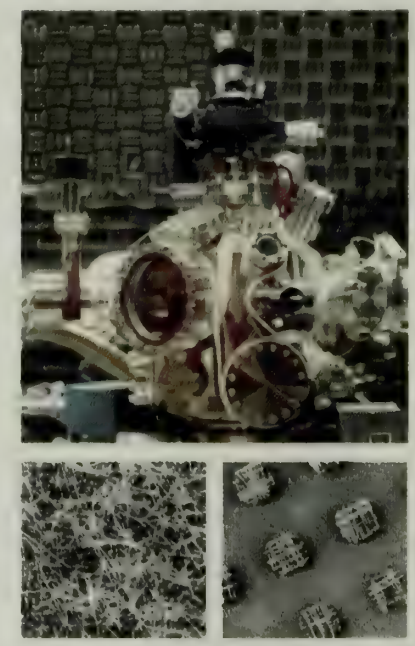
When he joined Columbia University in 1987 for his first job after postdoctoral studies at Caltech, he scrapped his past research on how electrons move through biological molecules. He wanted to be among the first to refine the techniques for viewing atoms by using scanning tunneling microscopes (STMs). Grant committees were dubious. "They'd say, 'This young principal investigator doesn't know anything about physics or STMs,'" Lieber recalls. But in the next four years he had the pleasure of proving them wrong—and showing how an STM could virtually excavate the structure of materials such as semiconductors and superconductors.

When physicists electrified science by creating high-temperature superconductors, Lieber switched his focus again. This time his key contributions included helping understand how to make the materials better conductors. Harvard bit, inviting him to join the faculty in 1991.

"You know the great scientists by the problems they pick to work on," says Caltech's Lewis. "Charlie knows how to place his scientific interest in the hot place, at the hot time. There's no teaching that. You're born with it."

The nanotech buzz grew louder in the early 1990s as scientists discovered "carbon nanotubes," soda straws of carbon just one or two nanometers wide. Carbon nanotubes have alluring properties, sometimes acting like semiconductors, other times like conductors. Scientists get both types when they make a batch of carbon nanotubes. Sorting them out is hard.

Such frustrations nudged Lieber toward silicon, the mainstay of the computer-chip business. He and his group realized they could grow silicon wires—chains of silicon crystals 2 to 20 nanometers in diameter and typically 10 microns long—on top of nanosize flakes of gold. They "harvest" the wires



**Bringing order to the infinitesimal: A scanning tunneling microscope lets scientists peek at atoms; a micrograph of silicon nanowires shows they grow haphazardly, but Lieber's team can harvest and arrange them into useful patterns.**

by putting them in solution and jostling the mixture until the wires snap off their gold anchors. Like tiny logs, the wires float on top of water. Researchers then force them into neat parallel formations and lift the patches of wires off the water using thin films.

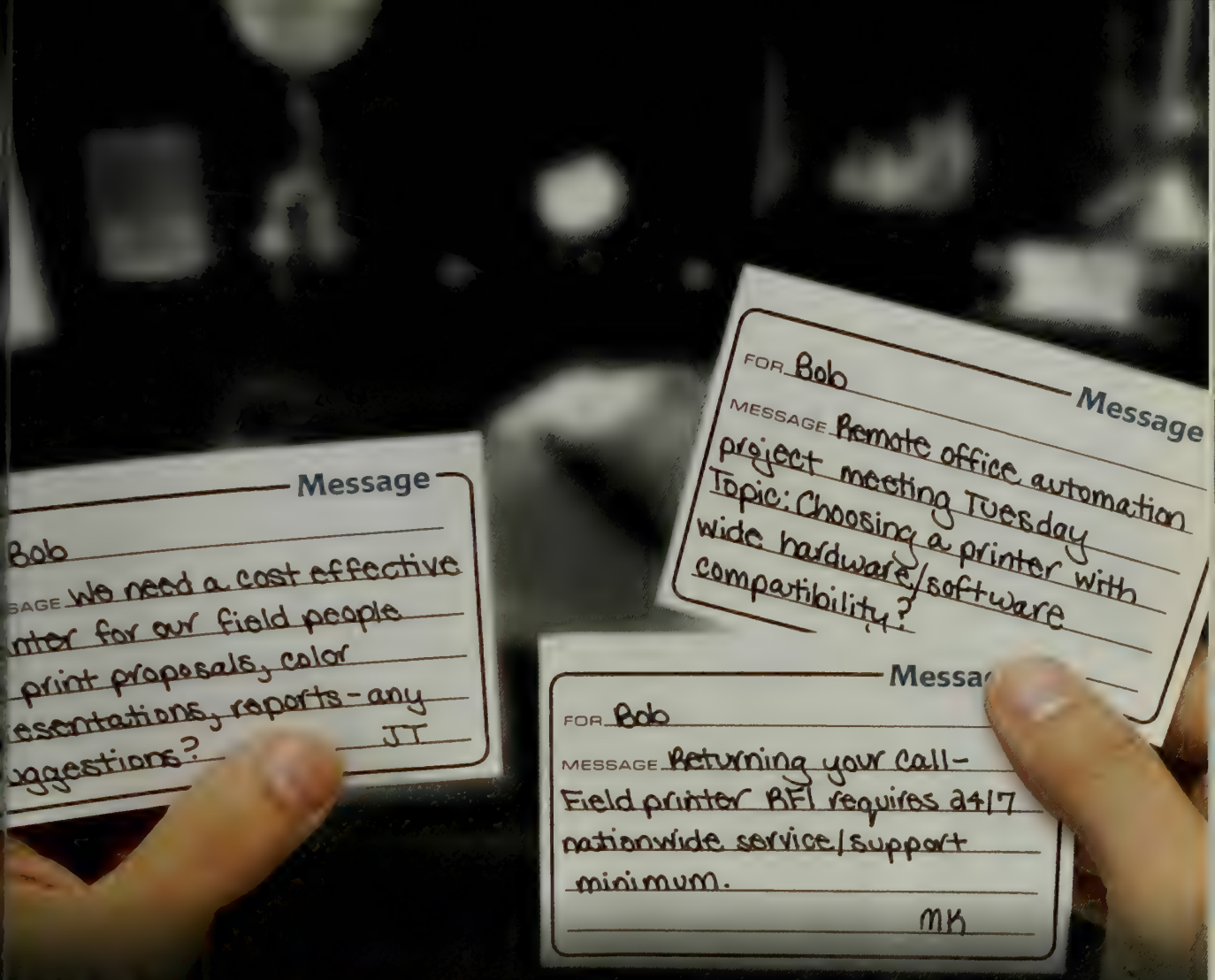
In early 2000 Lieber and another Harvard chemist, Hongkun Park, created exquisitely sensitive biodetectors by pasting molecules—an antibody, say, that is attracted only to a particular protein—to their nanowires. They hooked up with longtime venture capitalist Lawrence Bock, who had seeded 14 biotech companies, and formed a firm called Nanosys. "I settled on Lieber as the nucleating point for the company," says Bock. "He had been able to do in a lab with 24 graduate students what much larger groups had been doing with carbon nanotubes."

Nanosys, launched in September 2001, is modest in size if not ambition. Bock is chief executive of a team of 30 based in Palo Alto and has raised $17 million. Park, Lieber and several other noted nanotechies comprise the scientific advisory team and provide patents and consulting sessions. (The founders hold 20% of the company.) Bock wants Nanosys to build nanowire enabled modules—say, for a simple biosensor—which corporate partners could plug into more complex products. Think "'Intel inside,'" he quips.

"What's risky for Nanosys is learning how to make just the nanowires they want," says Josh Wolfe, editor of the *Forbes/Wolfe Nanotech Report*. "Once they do, we know what silicon can do. We've got four decades of work on silicon behind us."

Back at Harvard Lieber and his team have more nanowire ideas than they have time to explore. They have concocted nanowires of many semiconductor compounds and as long as 100 microns; "tutti-frutti" wires that have one type of semiconductor followed by another type; and others that have one material tucked inside shells of different materials. (Such wires, Lieber suggests, could have an electronic device like a diode already built in.) They have made colored light-emitting diodes from nanowires and are putting the final touches on electrically pumped minilasers. And still out there waiting to be created is that most elusive of breakthroughs—a nanoscale "universal computer" that can do any kind of computation.

"A universal computer would validate so much of what's been said about nanotech," Lieber says, slowing down to savor the prospect. "That, to me, is doable in five years. And that would make me feel—at least at that moment—like I've done something." F

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# Mr. Burns' Dilemma

**LARRY BURNS wants to ease General Motors out of the business it knows best—selling internal combustion engines.**

BY JONATHAN FAHEY

The stuffy second-floor hall of a private golf club in Bloomfield Hills, Mich. is hardly a venue for provocative ideas. But that's where Larry D. Burns, the 51-year-old vice president for planning and R&D for General Motors, recently briefed 50 retired GM executives on future products. They loved hearing about the tank-size sport utility vehicles for Cadillac and Hummer, and the V-8 sports car for Cadillac. Then he mentioned cars powered by hydrogen fuel cells that emit only water. "We started with a simple question," he told them. "If we were inventing the automobile today, what would we come up with?"

Everyone had heard a similar spiel before. They'd lived through more than one "revolutionary" power train—Wankel engines, gas-turbine engines, batteries. But it's the big gasoline engines that fund their pensions and golf memberships.

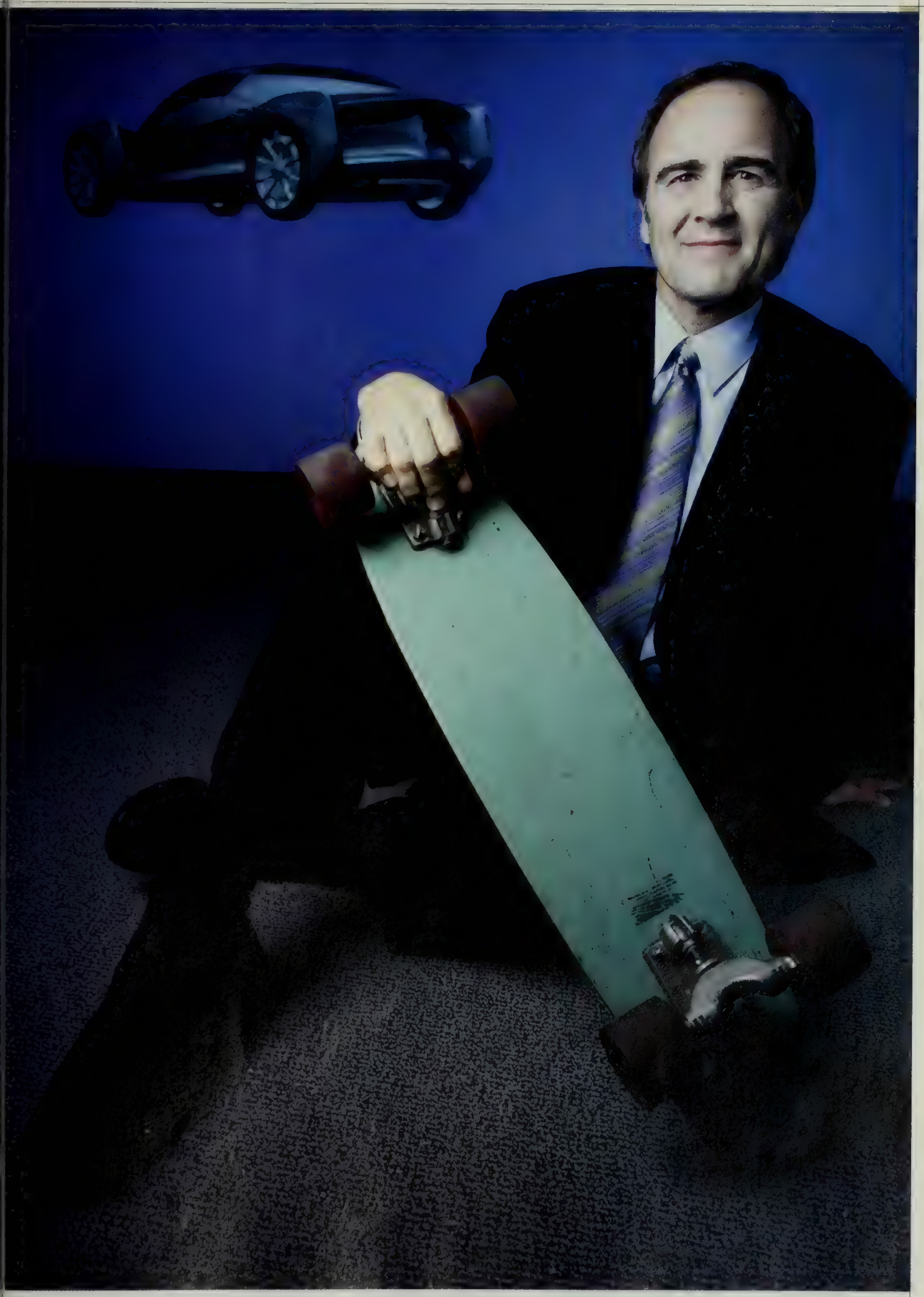
This is Burns' dilemma. Beyond the technical hurdles that must be cleared before fuel cells can be commercialized, can he force change on the biggest company in the world's biggest, stodgiest industry? For 94 years GM has built internal combustion engines; the fates of GM's 350,000 worldwide employees and 460,000 retirees in the U.S. are still largely welded to that engine. Burns thinks he can do better: Using hydrogen fuel cells, he wants to take automobiles out of the environmental debate; make cars that are safer, more fun and more stylish; and restore serious profitability to a company that is operating on the thinnest of margins. "I know fuel cells are a disruptive technology," Burns says. "But we have to attack ourselves."

Burns also knows something about the harsh necessities of adapting to change. Nine years ago he woke up in the middle of the night, nauseated, dizzy—and completely deaf. For a year he relied on a stenographer. "I was exhausted by the end of the day just trying to communicate," he recalls. A cochlear implant allows him to hear most speakers. Doctors are still unsure of the cause of his hearing loss.

Every day, on some level, he is selling mind-bending change to the organization and the industry. It helps to have a little self-effacing humor. He solemnly tells people of the weeks after losing his hearing, how his wife, while coping with a crabby spouse, searched the country for doctors and kept a journal of her efforts for him to read after work. One night, he recounts dryly, he scanned the diary to read that his wife had called Dr. Jack Kevorkian.

GM Chief Richard Wagoner, for one, has heard Burns' jokes once too often. "Sick, we call them," he says. But he goes on to say that Burns is the perfect guy for pushing radical technology—and has given him uncommon institutional support, by promoting him to vice president and putting him on GM's most senior management team in 1998, about the time fuel cells were starting to show promise.

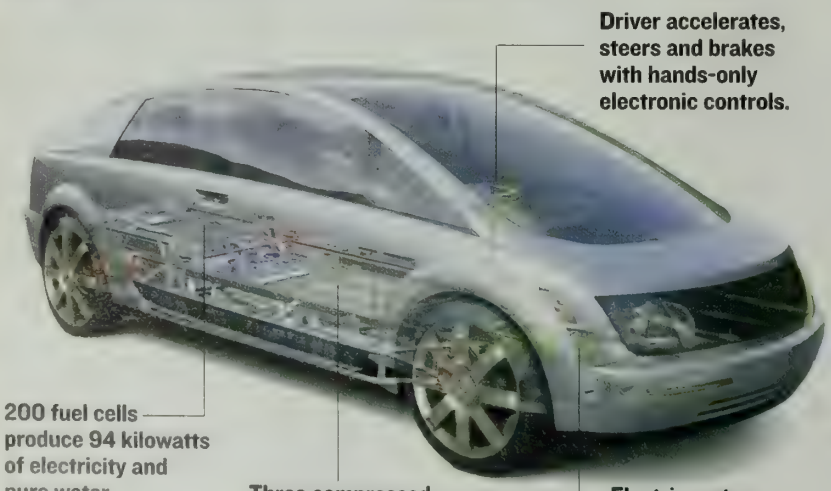
Promise? Fuel cells have been around since at least 1839, when the English scientist William Robert Grove built one out of platinum and zinc. The Apollo space program relied on hydrogen fuel cells, which work by stripping electrons from hydrogen atoms. Those electrons turn electric motors and power the headlights, radio and heater. When they are done working, the particles reunite with the hydrogen ions and with oxygen in the air to emit water. If only some way can be found to transport and store hydrogen, the fuel cell has two powerful things going for it: It doesn't pollute and it converts 55% of the chemical energy in the fuel into useful work. A gas engine's efficiency is only 30%.



Several companies have drivable fuel cell cars, but mass production is far off. Toyota last month announced it would lease two fuel cell vehicles, but at the daunting price of $10,000 per month, per vehicle. In order to get to commercially viable fuel cells, the cost per kilowatt of power must come down by a factor of ten, to about $50, Burns estimates. (100hp is 75 kilowatts.) Still to be determined: how to safely and economically store hydrogen on board. Also, no one has figured out a new system of hydrogen gas stations.

What makes Burns' pursuit different from those at other companies? His approach is to rethink the whole automobile around the fuel cell. In work that began in June 2000, Burns brought together two groups that almost never associate with each other: advanced technology and design.

## Hy-Wire Act GM's emissionless, hydrogen-powered car of the future.




Just an old trick for a 33-year GM veteran. A native of tiny Waterford, Mich., it dawned on a 13-year-old Burns that the way to escape the drudgery of his father's diner was to get an education. After an engineering degree from General Motors Institute, Burns spread his wings in the mid-1970s and set out for Berkeley, Calif. in a customized van, backpacking, skiing and getting a Ph.D. in civil engineering.

He came back to Motown in 1978, joined GM and established a reputation for unconventional ideas. There was an outbreak of hepatitis in Michigan schools while Burns was working on ways to reduce warranty costs; the Centers for Disease Control quickly discovered the cause—strawberries. Impressed, Burns created an early-detection system for problem parts based on the CDC model. It uses "sentinel" dealers to alert GM to problems outside of established norms—like an abnormal disease.

Burns' fuel cell group lets his people break free. Designers don't have to sculpt around bulky engines and steering columns; once the power plant is electric, the mechanical linkages that clutter today's cars can be replaced with electrical and electronic ones, similar to the controls on an airplane. What has emerged—vehicles called Autonomy and Hy-wire—are not simply new engines inside the same old car.

Engineers put the vehicle's guts in an 11-inch-thick platform that contains the fuel cells, electric motors, brakes, suspension and hydrogen storage. Designers then came up with a spacious, wide-open cabin that looks out through a giant floor-to-roof windshield *(see illustration)*.

The chassis, which GM calls the "skateboard," is supposed to last for decades, and it can put on different bodies like they were clothes. You might have a minivan body for Saturday afternoon and a sports car body for Saturday night. The idea is to be able to download different driving characteristics into the software that runs the motors and the suspensions, making the ride edgy and quick, or boatlike and soft. When a car is sitting in the garage, its fuel cells could supply the power needed to run a house—maybe even sell electricity back to the grid.

Some people are extremely doubtful of Burns' futuristic concept. "GM keeps telling Americans to wait—and wait and wait," says the Sierra Club's Daniel Becker. "No one should believe them anymore. It's the auto company that cried wolf." Worse for Burns, one of his two bosses, Vice Chairman Robert A. Lutz, makes no secret of his contempt for fuel cells.

Burns' response: money. As the guy in charge of planning for General Motors, Burns is forced to make the business case for fuel cells. If they play out the way he intends, they could help GM slash manufacturing costs. "This is a real business opportunity," Burns says. "A $180 billion company can't grow by getting a bit of market share here and there."

Six mornings a week, no matter what the season or which country he is in, Burns unhooks his cochlear implant, leaving him deaf, and goes for a three- or four-mile run. "It's like meditation," he says. "It recharges me." Perhaps that's how he contains and siphons off the combustible mix of conflicting challenges he faces every day. "He sees we have a responsibility and opportunity to affect the way billions of people live their lives," says Jamie C. Hsu, who oversees global technology management at GM. "He puts that burden on himself, and that drives him." F

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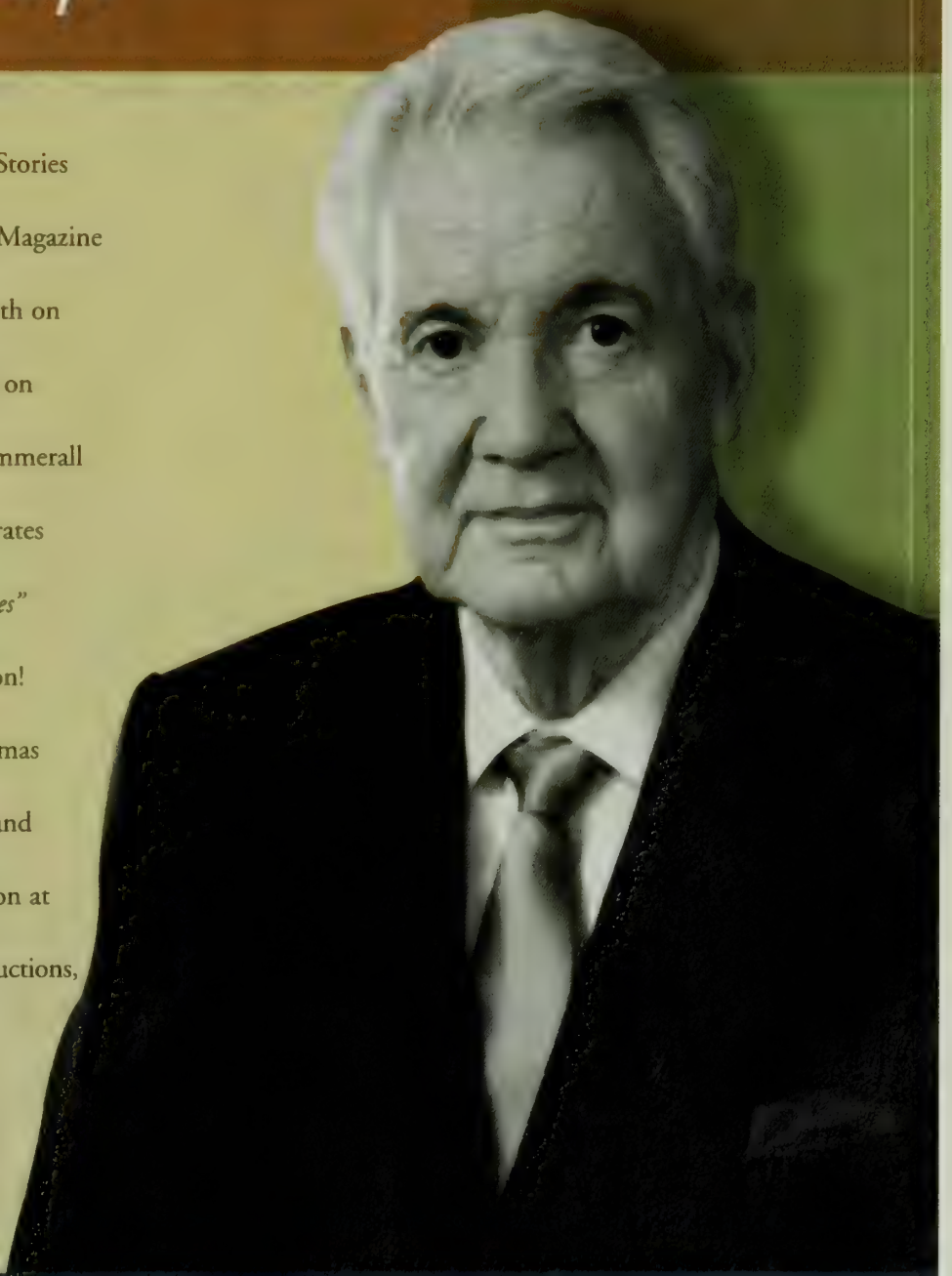

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# Science Beyond Belief

**STEVE QUAKE wants to speed up drug discovery by setting off a million reactions at once—all in a one-inch-square slab of rubber.**

BY ROBERT LANGRETH

Government and industry researchers made history two years ago when they unraveled the human genetic blueprint with the help of hundreds of DNA sequencers, $300,000 machines that are the size of dishwashers. Stephen R. Quake hopes to usher in the next revolution in biology by shrinking the size of equipment and planting several labs worth of it onto rubber chunks no bigger than a postage stamp. Each one will cost just a few hundred dollars.

The California Institute of Technology biophysicist is just 33 years old, but he already has etched his place in the emerging field of microfluidics, otherwise known as "lab on a chip." Starting with little hunks of clear rubber onto which thousands of microscopic valves, channels and reaction chambers no thicker than a strand of hair are molded, he is designing a new generation of gadgets that integrate bulky lab equipment into affordable devices that take up a small corner of a desk or fit into your hand. The goal is to turbocharge the pace of medical discovery by allowing thousands—even millions—of experiments to be performed simultaneously inside a chip. In the same way that spreadsheets can instantaneously perform complex sales projections, biomedical researchers in the future will pump in the proteins and other chemicals they want to test into a microchip, and the result will be quickly spit out on a computer display. "We want to revolutionize biology in the same way that the integrated circuit revolutionized information science," Quake says.

His most recent creation was the cover girl of the Oct. 18 issue of *Science*. Just one square inch, the chip contains 2,056 microvalves that can selectively mix reagents together (in this case to test for the activity of a particular enzyme in a bacterium) in 256 reaction chambers, each one holding less than one-billionth of a liter of fluorescent dye. By opening and shutting the valves, researchers can route reagents into and out of all chambers using just nine input hoses. Quake says he will be able to cram 100 times more features into the same space in the next few years.

Twenty years from now, the implications will be seismic. Every doctor may sport a handheld device that conducts the most sophisticated blood tests in minutes, instead of having to ship samples off to large testing labs and wait days for the results. Oncologists will be able to take a single tumor cell from a cancer patient and determine within minutes or hours which aberrant genes are responsible for the cancer's growth, allowing them to customize therapy to the patient's particular genetic quirks, rather than having to guess which drugs might work best. Automated drug-screening equipment that now costs millions may cost $1,000, enabling any academic to pursue promising drug leads instead of just well-heeled biotech firms.

Quake's technology "could allow biologists to do all sorts of things that we want to do that either aren't possible or are too time-consuming and

EXIT

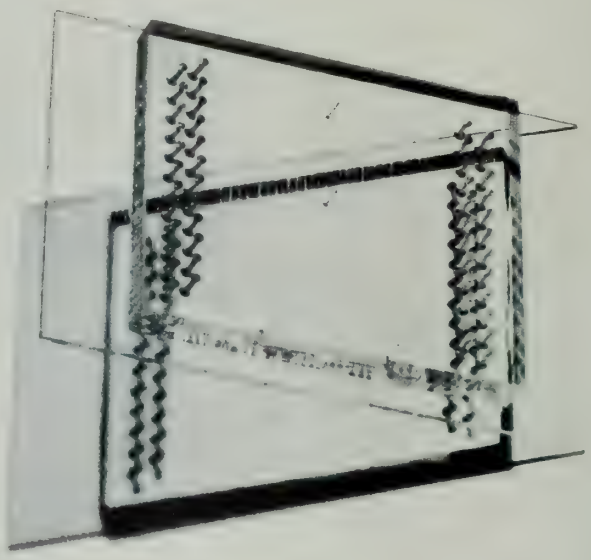
expensive to do on a macroscopic scale," says W. French Anderson, a gene therapy pioneer at the University of Southern California. He is working with Quake to create a thumb-size chip that can automatically catalog the genes and proteins inside a single stem cell. This could help scientists identify key genes for growing heart muscle and other tissues, leading to new treatments for heart failure.

Quake's father, an early software entrepreneur, exposed him to the power of computers at a young age. By high school (in the mid-1980s) Quake owned four computers and made extra money teaching his classmates programming. He zipped through his undergraduate years at Stanford University, earning both a B.S. in physics and a master's in math in four years. Sensing that pure physics was stagnating but biology was about to explode, he won a scholarship to Oxford University to study biophysics, completing his Ph.D. on the physical properties of DNA in three years. In 1996, at age 26, he joined the applied physics faculty at Caltech in Pasadena.

His interest in DNA soon led him to experiment with gadgets for manipulating biomolecules. Researchers have been toying with ultrafast miniaturized labs for a decade, shrinking single-function gear—such as machines for sizing DNA strands—onto chips, but combining multiple functions is difficult. A big hurdle: Using silicon (which requires a clean room) is expensive; its rigidity makes it hard to devise microscopic valves that won't leak.

Quake wanted something simpler. He got wind of Harvard chemist George Whitesides' success in making tiny fluid-handling devices with the same type of rubber used in household caulk. The idea hadn't gained much traction, but it made sense to Quake. Rubber was cheap and easy to work with; its flexibility made it simple to create waterproof seals. Quake figured what worked for toilets might suffice on a microscopic scale.

He and his group, along with Caltech's Axel Scherer, added a few clever twists. His chips, the size of a half-dollar or smaller, are made with two layers of rubber, relying on a technique similar to injection molding used to make toys. The bottom layer has hundreds or thousands of tiny intersecting liquid-handling channels, each about the width of a human hair (100 microns). The top layer contains hundreds of control channels through which pressurized water is pumped. Valves are formed where the control channels cross over the fluid channels. When pressurized water is fed over such an intersection, the pressure pushes down the thin layer of rubber, separating it from the fluid below, and it clamps shut the fluid channel below, like stepping on a hose. Quake's lab can make the chips with $30 bottles of rubber, an ultraviolet light to create molds and a convection oven to cure the rubber. A grad student can design and make a new chip in less than two days.



**Lab on a chip: a gadget to pinpoint disease-causing proteins.**

Now that the basic architecture is down, Quake's 20-person lab, along with various university collaborators, is rushing to explore potential real-world applications. Among them: shrinking an optical microscope and spectrometer to fit on a handheld device that could detect as little as a single molecule of pollutant in water (currently, such devices typically cost about $10,000 and are the size of a laser printer); a DNA-decoding chip that could run 100 times faster (and cost far less) than today's machines, which search for the key genetic variations that cause major diseases; and a chip the size of a postage stamp to purify minute quantities of DNA for fingerprinting and other tests. Once standalone devices are feasible, Quake hopes to combine them into a single chip.

Some of those ideas will be commercialized by privately held Fluidigm Corp., in South San Francisco, cofounded in 1999 by Quake, who sits on the board and owns a 7% stake. (Its $55 million-plus in venture backing comes from, among others, Eli Lilly's Lilly BioVentures investment arm.) Fluidigm's initial project is a $600 chip smaller than a credit card; it crystallizes disease-causing proteins, a key first step in determining their three-dimensional structure to reveal vulnerabilities that can be targeted with new drugs. The process is so labor-intensive that researchers have sketched the structures of less than 2% of the 100,000 or so human proteins.

Quake must outrace rivals doing similar work at dozens of university labs, as well as such firms as Caliper Technologies, that are pursuing different lab-on-a-chip technologies. Each of these upstarts must prove itself to a suspicious biology establishment, but the possibilities are prodigious. Instead of looking at a single gene or protein in isolation, researchers may one day study all of them at once to understand how the body functions and how things go wrong, charting for the first time the intricate biochemical chain reactions that lead to heart disease, diabetes or schizophrenia—and gaining astonishing insights into cures. F

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# A New Kind of Entitlement

Peruvian economist HERNANDO DE SOTO has radical ideas about how to end world poverty.

BY KERRY A. DOLAN

Every year Hernando de Soto racks up enough frequent-flier miles for a trip to the moon. The Peruvian economist has been on the road this year for eight months, giving speeches, meeting with world leaders—from Russian President Vladimir Putin and King Bhumibol Adulyadej of Thailand to U.N. Secretary-General Kofi Annan—and walking the slums of the world.

Since the publication of his book *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else* in the fall of 2000, De Soto, 61, has achieved a degree of celebrity that cuts across the political spectrum. His supporters include former Secretary of State Madeleine Albright and Reagan-era Housing & Urban Development Secretary Jack Kemp.

Why all the interest? De Soto has simply and lucidly spelled out one of the most bedeviling problems of poverty in developing countries—and offered an elegant solution. He points out that as much as 90% of the population in such nations operates extralegally, that is, outside the formal economy. Lost is the opportunity for them to leverage their assets, say, by getting a mortgage on a home or a loan on a business, and thus expand economic activity. Also lost are tax revenues from the extralegal businesses. Solution: Restructure the legal system to enable proper, streamlined titling of properties and businesses, which can then be leveraged and traded, thereby unlocking the value of the working poor's assets. De Soto estimates that those assets, which he calls "dead capital," are today worth $9.3 trillion.

His message has hit home with many leaders in the Third World because for them the challenge of dealing with generations of indigence looms so large. "In a country like Egypt, 10% of the people work in the legal sector, and in Mexico, 20%," De Soto explains by phone from Thailand. "How do I get the other 80% into the system?" More than two-thirds of the world's 6.1 billion people live in either developing or formerly communist countries, where much of the economy is extralegal. But the crisis affects the industrial world, as well. Enabling economic growth in the developing world would create a new set of markets. "De Soto's ideas about how to empower the world's poor represent one of the most significant economic insights of our time," says Bill Clinton, another fan, via e-mail.

It helps that De Soto is not only passionate about his ideas but also a good storyteller with a sense of humor. On the podium at a recent speech sponsored by the Fannie Mae Foundation in Washington, D.C., he held up an apple by way of illustration. He explained that he had bought the piece of fruit, but couldn't find anywhere on the apple any information indicating that it belonged to him. Undocumented apple ownership, he added, is like property ownership in many parts of the world. "He is absolutely the best at selling an

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idea," says Peter Schaefer, an old friend and a Washington-based senior fellow at De Soto's think tank, the Institute for Liberty & Democracy, known as the ILD. "He gets these standing ovations from gray-haired doyennes in New York City as well as young computer whizzes."

The son of a diplomat and a housewife, De Soto was born in Arequipa, Peru. In 1948, when he was 7, political problems—a coup d'état—sent the family fleeing to Switzerland. He returned to Lima for college but got graduate degrees in economics and politics in Switzerland. Each time he came back to Peru he was struck by the contrast between the poverty in his homeland and the entrepreneurial spirit of its people.

In Lima he found that nearly half the work force operated outside the legal system. Most often it was tied to economic necessity. To get the legal paperwork to establish a shop with one sewing machine in the capital took 289 days and cost $1,230—31 times the monthly minimum wage back in 1983. To investigate the problem further and, perhaps, find a remedy, De Soto founded the ILD, eventually getting funding from the U.S. Agency for International Development.

In 1987 he published his findings in *The Other Path: The Invisible Revolution in the Third World.* The title was a deliberate tilt at the Shining Path, a Marxist terrorist group then active in Peru. In the book he argued that poor countries stayed poor not because of capitalism, but for lack of properly developed capitalism. It became a bestseller in Latin America and was translated into ten languages.

At the same time De Soto was transforming his theory into action. With the support of then-president Alan Garcia and his successor, Alberto Fujimori, the ILD created a plan for Peru's poor to get title to land and businesses more quickly and efficiently. Lima residents could deal with just one government agency to obtain a title, instead of up to 14, lowering the cost of registering a business to $174. From 1990 to 1995, 300,000 titles were registered in urban Lima. The value of that land typically doubled by 1998.

In the early 1990s De Soto got a call from El Salvador's president, Alfredo (Freddy) Cristiani. Could he replicate his work in the war-ravaged Central American nation? De Soto and his ILD colleagues trained Salvadorans to set up a system of titling. By next year close to 1 million properties will have been titled. "At five people per property, that's nearly the whole country," De Soto says proudly. And the El Salvadoran property registry is recording $800 million in new mortgages a year.

Other leaders from the Third World called as well. After an ideological split with Fujimori in 1993 De Soto became more open to exporting his "poor people's capitalism" program. Since 1997 he's been brought in by the governments of Haiti, Egypt, Mexico and the Philippines. More recently he's started projects in Honduras and Ghana, where he was joined by former President Clinton.

De Soto has his critics. Among them is Jagdish Bhagwati, a Columbia University economics professor who wrote in the political journal the *New Leader* that property titling alone won't bring prosperity to places of chronic poverty; there are many other factors to consider. De Soto agrees, to a point. "Education, elimination of corruption, financial reforms—all those things are already on the agenda. But the argument I'm talking about isn't," he says. "I believe that what we're doing is indispensable. But I don't think it's the only thing."

On the cusp of hope or despair: a slum in the Philippines.

**De Soto's critics argue that property titling by itself WON'T BRING PROSPERITY to places trapped by chronic poverty.**

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# A Dirty Business

**CHAITAN KHOSLA is leading a back-to-earth movement—using soil bacteria to manufacture lifesaving drugs.**

BY ROBERT LANGRETH

Few people enjoy getting their hands dirty more than Chaitan Khosla. Among the leaves and sticks and stones, the Stanford University chemical engineer is pioneering a radical method for producing new medicines to treat infections, cancer and other scourges—with the help of tiny, genetically modified soil bacteria. Some lab. Yet in the past half-century microbe and plant samples from exotic locales around the world have been one of the richest sources of new drugs. Soil bacteria and fungi are particularly proficient at producing natural chemical weapons, apparently as part of a subterranean arms race to spew out toxic chemicals to kill rival species. They already have contributed to the development of the antibiotics erythromycin and tetracycline, the cancer chemotherapy drug doxorubicin, Wyeth's transplant drug Rapamune, and Merck's cholesterol-lowering medicine, Mevacor.

Khosla is pushing nature's ingenuity one step further. By selectively altering key enzymes in bacteria's chemical weapons factories, he hopes to redesign microbes so they are more likely to produce compounds that can fight human disease. "The goal is to speed up evolution to make drugs cheaper, better and faster," says Khosla.

In the highly specialized world of scientific research, Khosla is a rare jack-of-all-trades, fluent in chemistry, genetics, engineering and microbiology. "He's brilliant," says Memorial Sloan-Kettering Cancer Center chemist Samuel Danishefsky, who is collaborating with Khosla on a cancer drug. "A lot of researchers are technocrats, but he's a big-picture guy. He has a wonderful sense of how to integrate chemistry and biology to bring products out into the world."

To commercialize his ideas, Khosla founded Kosan Biosciences in Hayward, Calif. with Daniel Santi, a former biochemist from the University of California, San Francisco. Over the next decade they hope to turn out novel types of antibiotics to outsmart microbes that are resistant to existing medicines. (Only one totally new class of antibiotic has been introduced in nearly 40 years.) Kosan's first such drug, a more powerful version of erythromycin, could begin human trials with partner Johnson & Johnson within a couple years. Another project aims to use bacteria to produce superpowerful chemotherapy agents to shrink tumors that have developed resistance to existing drugs such as Bristol-Myers Squibb's Taxol.

Distant even [illegible] but not as far as Khosla, 38, has already come. He was raised in a suburb of Bombay and studied chemical engineering at the Indian Institute of Technology. But at the time, in the early 1980s, Khosla feared that he would end up fermenting beer, making animal feed, or refining petroleum. At

THOMAS BROENING FOR FORBES

the college library one day, he read a journal article by the late Jay Bailey, a Caltech chemical engineer who was trying to use genetic engineering to fashion "designer" bacteria to produce drugs, agricultural products and industrial chemicals. Fascinated, Khosla enrolled in graduate school at Caltech, becoming one of Bailey's star protégés. Most grad students toil years to publish a single academic article; Khosla pushed out six papers in five years. He thrived in America's risk-taking culture.

His life took another twist after he came upon another leading scientist. An English geneticist named David Hopwood had discovered one of the genes that soil bacteria use to manufacture antibiotics. The finding helped solve a long-standing mystery of how soil bacteria could make such antibiotics and other druglike chemicals, called polyketides. Some bacteria, it turned out, produce polyketides in an assembly-line fashion in much the same way that General Motors produces cars. They contain dozens of modular enzymes, each of which assembles one component of the polyketide and then passes it on to the next team enzyme.

Khosla immediately grasped the implications: In the future, biotech companies might—in theory, at least—be able to genetically tweak bacteria to spew out improved antibiotics for human use by mixing and matching modular enzymes from different bacteria in ways nature never intended. There was also the potential for developing better cancer drugs, since polyketides have also been a fertile source of chemotherapy agents. Although he had already accepted a job at Stanford University, Khosla decided he had to go to England to learn this promising new field. He intercepted Hopwood at a conference in Los Angeles and impressed him so much in ten minutes that Hopwood offered him a job on the spot. By the time he came back to Stanford in 1992, Khosla was neck-deep into manipulating soil bacteria to make better drugs. He spent years tediously deducing the rules by which polyketides' enzymes work and how to combine them in new ways.

Kosan Biosciences' métier is out of the mainstream of medicinal chemistry. The hot new thing in the drug industry was—and still is—robotic chemistry techniques that could automatically synthesize thousands of chemicals in a few days. In recent years Merck, Pfizer, GlaxoSmithKline and other drug giants have moved away from screening natural compounds, which is unpredictable and labor intensive, in favor of automation. Khosla thought this was short-sighted. "Nature has been a great source of drugs for the last 100 years," he says. With a little genetic tinkering, "there is no reason to believe that they cannot be a great source for the next 100."

## Improving on Nature

**Kosan Biosciences' engineered version of the natural tumor fighter geldanamycin *(green)* attacks a cancer-promoting protein called Hsp-90 *(gold and blue)*.**

Such thinking helped reshape his company's mission. At first Kosan set out to be a pure technology outfit, engineering bacteria to randomly produce "libraries" of thousands of new polyketides that could then be sold to big drug firms. But Khosla and Santi realized it would be much more profitable to find ways of improving already-known natural drugs.

In 1997 Khosla's lab engineered bacteria to make new variants of erythromycin. The work caught the attention of J&J, which is providing undisclosed funding to devise new antibiotics that work against resistant strains. Kosan has generated several hundred variants of the antibiotic, some of which wipe out strains of bacteria that are resistant to most other marketed drugs—in test tube and animal experiments, anyway.

Khosla and company also are using engineered bacteria to grow new cancer drugs that would be very difficult to make in huge batches in the lab. Kosan is in early human trials of epothilone-D, a potent variant of a promising new class of chemotherapy drugs derived from an African soil bacteria, *Sorangium cellulosum.* Switzerland's Roche Holding is paying up to $220 million to codevelop the drug. Animal tests conducted by Danishefsky at Memorial-Sloan Kettering, who discovered epothilone-D, show the compound can tame tumors that are impervious to Taxol and other chemotherapy drugs. Without Kosan's technology it would be tough to affordably produce enough quantities of the drug to conduct human trials. Kosan is also working with the National Cancer Institute to test analogues of geldanamycin, a bacteria-derived agent, in early human trials that may boost the effectiveness of chemotherapy. It does so by helping degrade crucial cell-signaling proteins that may help tumors to spread.

Back in his Stanford laboratory, Khosla admits that he has a way to go before his approach can be as proficient at churning out druglike compounds as automated chemistry robots. "It is a herculean challenge because we are doing atomic surgery on very delicate, complex structures," he says. His firm faces competition from small shops such as England's Biotica Technology and giants like Novartis. Khosla won't relax until his methods yield medicines. In drug development, he says, "there is no partial credit." F

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# Suzhou Industrial Par

## A prime location fo foreign companie looking to establis a base in China.

With entrance into the Chinese market now a firm goal for many overseas businesses, the question for some time has been not when to enter the fray, but where. China's original five special economic zones offer favourable tax rates and excellent locations throughout the mainland. The latest zone to join the list however offers even more, including independent decision-making power that goes beyond any other area in China.

Suzhou Industrial Park (SIP), on the outskirts of the ancient city of Suzhou, is an exceptional base for Chinese operations. Effectively a city in its own right, SIP is just 70km from Shanghai, placing it right in the centre of the Yangtze Delta transportation hub and yet offering substantial savings on setting up in Shanghai itself.

From the twentieth floor of the SIP central offices, at the centre of the development, it is possible to see farmland on the horizon. The whole area was once agricultural land. But look closer in and the sheer scale of the park becomes apparent. Phase One of construction began in 1994, was completed four years later, and consists of 12 square km of lots. Phases Two and Three are still underway and extend the total area to 70 square km, across Lake Jingji and towards the entrance of the Huning express way which connects Shanghai and Jiangsu Province. By the time of completion, SIP will lie just half an hour away by road from Shanghai.

Governmental support has been one of the keys to SIP's success. In 1994, the park was born, from an agreement signed by both China and Singapore ministers. This high-level involvement has cont and has meant that SIP has always enjoyed preferential condi For example, companies setting up in the area benefit from th one stop approval status of the park. Working through th authorities, newcomers can organise business license applicat approval, documentation, utilities applications, custom clear and so on, without having to apply to separate agencies. F more, SIP, unique amongst Special Economic Zones, is autho approve investment projects of unlimited size. Elsewhere in approval authority is limited to US$ 30 million.

Favourable conditions have made doing business in S attractive prospect. Financial statistics have also kept the reg the top of incoming companies wish-lists. GDP has grow average of 48% annually since 1994, and stands at over RMB 25 b for 2002. So far, the site has attracted a total investment of US$16 billion. Around 935 foreign enterprises have bases i park, of which, 43 are listed in the Fortune 500, including Sie Group, Samsung Electric, Nabisco Corporation, Black & De Group and Glaxo-Wellcome Inc.. Many of these companie already achieving profits.

Beyond the pure figures, however, Suzhou Industrial Park offers world-class infrastructure. One of the benefits of build city from scratch has been the opportunity to provide utilities su gas, electricity and water supplies, as well as sewage treatment. telecommunications that exactly match the needs of inco companies. Urban construction planning has also ensured that r streetlights, green areas, and housing are combined to maximum benefit to new residents. SIP is also home to a w range of educational establishments, including kindergar

and middle schools and even a vocational school that helps ewly-qualified workers into the system. Medical care, in the range of clinics, foreign-run hospitals and first-aid centres ace of mind to employees, residents and their families alike. acilities also abound, with recreation centres and sports scattered across the area. Large green areas have also been since the start of construction. Dedicated green land is kept % as standard and total green space accounts for close to ing the park a natural atmosphere, despite the industrial commerce here.

ternational companies interested in investing in the area, nent standards are frequently expressed as a priority. SIP from its Singapore connection, drawing on high quality s that the city state has brought to the region. The park's nent management team has a high Singaporean presence, nd a thousand of the park's trainee management have training in Singaporean government departments. Learning experiences of an economically-developed country has hat SIP has always been ahead of the competition when it managing the growth of one of China's most exciting nt opportunities.

**Suzhou Industrial Park Administration Committee**

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# Safe at any Speed

**In the most turbulent of times, STEVEN WALLMAN is trying to make the market a more efficient—and more secure—place for individual investors.**

BY NATHAN VARDI

Two things doomed the old-style customer's man on Wall Street, the fellow who made his living on commissions. One was the computer: Who needs a warm-blooded middleman to move 100 shares of Kodak when a modem will do? The other was the end of price rigging. Beginning in 1975 it was no longer legal for the brokerage industry to maintain a minimum commission schedule. Now brokers make most of their money on other fees and interest rate spreads.

Steven Wallman aims to do to the mutual fund industry what Charles Schwab did to the old fixed commission structure—rip it up. His four-year-old FolioFN in Vienna, Va. has a system for replacing the traditional fund with automated portfolios that the customers manage from their own computers.

Mutual funds, themselves a financial innovation from 1924 *(see page 130)*, give the small investor what large investors always could afford: professional management and diversification. Instead of owning 3.45 shares of this car company and 1.19 shares of that chemical company and so on, you own 100 shares of a mutual fund that has 40 stocks in it. Wallman's variation on this invention is to let the investor hold widely diversified portfolios directly. Cheap computing makes fractional share positions and daily asset value updates entirely plausible; it also brings liquidity, since a single mouse click can create a simultaneous buy or sell order for all the stocks in the portfolio.

Do-it-yourself fund management offers two things to the small investor. One is that it cuts costs dramatically. A typical equity fund gobbles up more than 1% of your assets annually—$2,000 on a holding of $200,000. Wallman will handle a 50-stock portfolio for a flat $150 a year. The other thing is that direct ownership of stocks has a big tax advantage. A fund cannot pass through tax losses to its customers. A computerized portfolio can. If you have $50,000 of losing positions in that $200,000 account, the computer can pluck them out for sale, giving you a capital loss to claim on your tax return and leaving the winners undisturbed.

"Treating the market like a lottery is a loser for most people, most of the time," says Wallman, 49. "I hope to make the market a lot better for them." Meaning, make it more efficient for the little guy, giving him some of the advantages of exceedingly wealthy and institutional investors—and, maybe, even a little say in how companies are run. Imagine cheap hedge fund protections for small investors; simpler and less costly investments in corporate and municipal bonds; direct access to

individual foreign companies that don't trade on American exchanges.

Wallman's is a private-sector solution to a problem he first encountered as a regulator. After President Bill Clinton named him as a commissioner on the Securities & Exchange Commission in 1994, Wallman toured the country talking with all kinds of trade organizations and consumer groups about how asset diversification could minimize investment risk. The securities lawyer and former partner at Covington & Burling heard plenty of complaints from investors about the fees and high tax bills mutual funds generated when they bought and sold securities. (One speech in 1994 to 50 people caused almost no reaction at all. The topic: how the Internet would change the securities industry. Perhaps six people stayed in their seats till the end.)

As an SEC commissioner, Wallman was able to save investors money by championing decimalization, the listing of stock prices in dollars and cents instead of dollars and fractions. New technology meant that computers could handle the many quotes that decimaled stock prices would create. Decimalization has narrowed the spread between the highest bids and lowest offers, meaning individual investors are paying less when buying stocks and getting more when selling them, much to the chagrin of Nasdaq marketmakers whose spreads have been crimped.

But Wallman knew that regulatory efforts could only go so far. Advances in technology and the growing reach of the Internet, including the appearance of online broker E-Trade, begged for the creation of new financial products. So Wallman left the SEC after one term to start FolioFN, raising an estimated $3 million from now bankrupt PSInet in return for a convertible note. He later raised more funds in six rounds, which included contributions by American Century Ventures and the Mayfield Fund. Wallman says he still holds a "significant" amount of equity.

FolioFN executed its first trade in May 2000—and immediately triggered hostility from the mutual fund industry. Twice the Investment Company Institute, the industry trade group, tried to persuade the SEC to regulate FolioFN as if it were a mutual fund, instead of a brokerage. The SEC denied the petition. In fact, Wallman now has his imitators: Fidelity Investments and E-Trade have similar offerings.

## A Fat Target

**$6 trillion**
The amount U.S. investors have socked away in mutual funds.

**94 million**
The number of individual U.S. investors in mutual funds.

**1.4%** The average annual expenses for mutual fund assets.

**$84 billion**
The estimated amount Americans shell out each year on mutual fund management fees.

*Sources: Investment Company Institute; Morningstar.*

Brokers have fallen on hard times and FolioFN is not exempt. It is reportedly losing money and carrying no more than 8,000 accounts (Wallman won't confirm the numbers). His competitors seem to be even worse off: Netfolio shut down last year; BuyandHold Securities was sold out of bankruptcy court to Fahnestock Viner Holdings, a small Toronto-based financial outfit.

Wallman is keeping his company alive by getting such outfits as Quick & Reilly, the brokerage arm of FleetBoston Financial, and Credit Union National Association Mutual, which services the credit union industry, to act as distributors of his products. FolioFN is also picking up some revenue by applying its software and trading systems to related tasks, such as automating the work of maintaining separately managed accounts at Brinker Capital. With help from FolioFN-like trading platforms, separately managed account providers can now accept individual accounts as small as $150,000 and apply a portfolio strategy (such as selling loss positions) to a large group of customers en masse.

Wallman sees new ways to harness cheap computing to the task of investing capital. The Vanguard-style index fund is cheap, he concedes ($360 a year for a $200,000 investment in the S&P), but it's mindless. You wind up with a certain percentage of your money in Cisco or Kmart if that's in the index, no matter how overpriced it is. Wallman has a patent on an alternative: an intelligent index fund that tracks the collective portfolio decisions of several thousand individual investors. He holds another patent on a risk-reduced portfolio that would combine stock investments with portfolio insurance and such hedging techniques as collars. With a collar, you agree to forfeit appreciation in a stock beyond a certain point in return for getting insurance against a fall in the stock below a certain point. (It amounts to selling an out-of-the-money call option and using the proceeds to buy an out-of-the-money put option.) If you have a $5 million position in one stock, a big broker will sell you a collar. Wallman sees no reason why computers cannot make collars available to someone trying to hedge a $5,000 position.

Also on Wallman's agenda is getting into the nascent business of selling bonds over the Internet, without the usual high fees. He may also venture into global stocks, now costly to buy and sell unless they trade on the New York Stock Exchange or as American Depositary Receipts.

Computers have massively cut the cost of trading stocks. But they have scarcely begun to do all that they can do for the little investor. ■

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# The Matchmaker

**What happens to your donations? VANESSA KIRSCH is reinventing charity by screening candidates before you sign the check—and demanding results from recipients.**

BY ROB WHERRY

Charity is a swell idea—especially if your dough is used in the ways you intended. What if you could bring some of the same sensibilities to giving away money that you do to picking stocks? Vanessa Kirsch has an answer. "I want to create a way that philanthropists can comparison shop," she says. In other words, a portfolio of nonprofit companies, prescreened for transparency and results, and held to account. No more slip-sliding accounting à la the United Way of America.

Her vehicle is a Boston-based fund called New Profit. Launched five years ago, it has raised $11 million from investors (yes, "investors," not "donors"), and doled out a portion of that cash to just eight nonprofits—very much in the manner of a venture-capital fund. "We don't want to put a little across a lot of ideas," says Mark E. Nunnelly, a New Profit investor and a managing director at Bain Capital. Kirsch doesn't give money away easily. She wants her investments to be able to break loose from their local boundaries and become national brands in order to think more broadly about their programs. But she holds them to strict reporting guidelines. "Nonprofits haven't figured out how to bring themselves to scale," she says. "There are a thousand points of light but so few beacons."

The key to New Profit is its scorecard, which rates a nonprofit on a series of financial and other sorts of benchmarks. An afterschool program, for example, can rack up good points for keeping down costs and improving student performance on standardized tests. New Profit investors get scorecards on all organizations once every quarter. They're usually familiar with them already but, at a glance, they can tell if their money is being put to good use. Poor performers are washed out by well-run operations. That happened once, Kirsch says, to a group that lost its focus; funding dropped after two quarters. In another case, the fund withheld payments to an organization until it got its act together.

The timing of New Profit's launch was fortuitous. Its rise coincided with the now wistfully remembered technology boom of the late 1990s, when unprecedented wealth came to a new generation with hard-nosed instincts. "It was a turning point," says Kirsch. "We had some entrepreneurs who started to apply the same rules they used to make their money to their philanthropy." Donors, she says, are still dipping into their pockets, even in more straitened times.

Kirsch has always had a weakness for causes, but she learned to marry them to a disciplined approach. She grew up in the shadow of Harvard University, the daughter of a painter and a physicist. Severely dyslexic, she worked hard to get through school and the SATs, but gained acceptance to Tufts after writing a passionate essay that explained her disorder. Kirsch was always politically active and after graduation she worked on Michael Dukakis' doomed presidential cam-

paign. Later, a job at a polling organization had her conducting research on Generation X. The results were frustrating, but out of it came the idea for a business called Public Allies.

Founded in 1992, her Washington, D.C.-based company matched recent college graduates with organizations that needed talented managerial help. Those who signed up got a $4,725-a-year education grant from AmeriCorps, as well as health benefits. Today Public Allies has placed 1,000 people in more than 400 nonprofits.

But Kirsch burned out long ago, leaving the company in 1995. The bigger it got, the harder it was to raise money. "I was hitting my head against a wall," she recalls. So she took a year off to travel around the world with her fiancé, who heads a Boston nonprofit. It was a busman's vacation: The two of them interviewed 350 activists of many different stripes. Those meetings provoked ideas about how to keep an organization going. Companies like Microsoft and Cisco evolved quickly from their garage-based origins. Why couldn't most of America's 1.4 million nonprofits solidify and grow large?

Back in the States, Kirsch gathered a group of 40 people—nonprofit veterans, donors and recipients of grants—every Monday night for four months at the Kennedy School of Government. Heated discussions there were aplenty. But they all agreed that holding nonprofits to established standards would be a good idea. But how?

Turned out that Harvard Business School professor Robert Kaplan and a colleague had developed a "balanced scorecard" for corporate clients. In the early 1990s they had devised a way for businesses and other organizations to measure nonfinancial performance—customer perception, for example, or a company's ability to foster knowledge within its work force—and measure talent it wanted to keep or promote. The scorecard was useful to Mobil Corp. (as it was then known) when it was trying to reorganize its business around competition on service, rather than price. The U.S. Army used it to judge whether troops were sufficiently prepared to deploy in hot spots. After some coaxing, Kaplan agreed to adapt his scorecard to the nonprofit world. The Monitor Group, a Boston consultancy, offered free office space and field work.

Kaplan's new scorecard is tailored to each of New Profit's potential investments. Among the categories: social impact, user satisfaction, finances, goals met and staff retention. How to judge a candidate? A group of Monitor consultants descends on an organization, scours the operation and comes out with a list of doable objectives—a growth plan of sorts—that the organization must hit in order for New Profit to consider donating to it. Such scrutiny can scare off some nonprofits. "A lot of organizations initially applied," says Kirsch. "But then they didn't want to be under such a microscope." Roughly 2% of all applicants get funded. If they're lucky enough to make the cut, they get an average $1 million, distributed in quarterly parcels.

Bell (Building Enterprises for Learning and Living) in Boston is one of New Profit's successes. An afterschool and summer education program for poor kids, the group demonstrated that its students had a seven-month head start in reading, writing and math over their peers. That got good marks for social impact. Parent surveys rated it highly, too. Bell also scored well on its ability to keep tutoring costs to $10 an hour, retain 90% of its staff and teach 95% of its workers to use its data processing system.

New Profit isn't all about scores. It's been a longtime supporter of Jumpstart, a reading program. Starting out as a pilot for early childhood education curriculum in New Haven, Conn., Jumpstart now serves 30 communities and helps 4,500 children. (It was the subject of a Harvard Business School case study last year.) But the organization recently hit a snag. After eight years Jumpstart's founder was ready to leave. Kirsch searched for a replacement and found Robert Waldron, then chief executive of Score Learning Centers, a $50 million afterschool tutoring program. Over dinner in a Boston restaurant, Kirsch spent as much time selling Waldron as she did selling his wife on it—a smart move, since he was debating his decision. "Vanessa showed me the light, and if I hadn't taken the job my wife would have showed me the door," laughs Waldron. He joined in March.

Is this venture impervious to downturn? Kirsch says her portfolio is growing at 35% a year, compared with a dismal 3% for the industry. With minimum investments at $100,000 over four years, she hopes to raise another $9 million in two years and increase her holdings to around two dozen nonprofits—primarily with educational organizations in the Northeast corridor. Imitators already abound. Kirsch says there are now 30 venture philanthropy funds, up from 3 when she started New Profit.

She, too, must think competitively. Where next? Kirsch's expertise is in education. But she hints that someday she may look at another needy industry whose miserable results can be measured: health care. F

## Giving to the Few

**Most of U.S. donations go to just a fraction of all nonprofits.**

**$1.4 trillion**[1]
Estimated total assets of U.S. nonprofits.

**64%** The percentage of nonprofits with budgets of less than $500,000.

**$137 billion**[1]
Estimated total tax deductions for charitable contributions in 2000.

**30** Estimated number of New Profit-like venture philanthropy funds.

**$1,050**[1]
The typical annual contribution to nonprofits.

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# The Biggest Damn Opportunity

**Former Microsoftie CHARLES SIMONYI wants to encode software the way people think.**

BY QUENTIN HARDY

Software freed Charles Simonyi from a police state. Then it made him one of the world's richest men. Now he wants to liberate code—to simplify software development the way John D. Rockefeller rationalized the refining and distribution of oil. "Right now, consumer electronics sucks, car navigation sucks," says Simonyi, who fled communist Hungary at age 17 in 1966 and later became one of the chief builders of Microsoft. "Why? Because any project like that is so tough to code that a team is delighted just to get through it; they'll never try to do it over. What if they could easily try ten different versions to make it better?"

That's why Simonyi left Microsoft this year to launch Intentional Software—to deliver computing systems from their crisis of complexity. Intentional Software will exploit ideas developed at Xerox's Palo Alto Research Center and during Simonyi's ten years of research at Microsoft. The promise: cutting-edge strategies for software for a coming world of multiple supercomputers, where continually swapped programs and big databases will find and exploit unseen patterns in nature and society.

Simonyi's work must reverse a struggle that has bedeviled computers since their inception just over half a century ago: the fact that even the sharpest programmers must spend much of their time acting like machines. "Now coders are like authors who also have to set type by hand," Simonyi says. "I want it so they can just write."

Already the burgeoning size of computer programs, and the complications that occur as even small programs interact over the Internet, hint at the coming challenge. "Right now software teams are drowning in complexity," says Grady Booch, chief scientist at Rational Software. "Simonyi wants to encode the way people think—a way cool idea, but man, is it hard."

It was never easy. Five decades back programmers effectively were the software, writing math tasks in the ones and zeros of binary algebra, then setting these designs on electromagnetic switches. "On" was one, "off" was zero. When the switches stopped flipping, problem solved. It helped the calculation of things like artillery trajectories.

More switches, eventually transistors, made possible more complex computing, and software automated the hand-setting of switches. Even now, the millions of on/off transistors that nest in a tiny semiconductor are ultimately carrying out a series of binary exercises that control the software in a kid's toy—or a program at the National Security Agency.

Simonyi, 54, learned on machines a few steps above hand-settings. Through family connections he began programming at 15 in his native Budapest on an old Soviet machine. He then moved to a Danish computer in

the state statistical offices, where he watched the machines at night. "They exploited me, having me work for free, so I exploited them," he says, nestled in his 20,000-square-foot mansion in suburban Medina, Wash. and surrounded by tech and art.

Clearly a smart guy in a nation producing lots of math whizzes (from Intel's Andy Grove to the H-bomb's Edward Teller), Simonyi won entry into the Hungarian state university at age 17. His knowledge of Danish computing got him a one-year assignment in Copenhagen on the promise that he would return to Hungary. Instead, he skipped from Denmark to the U.S., entering the University of California, Berkeley on his skills as a programmer.

Computing had progressed beyond simple programs and data to machines with operating systems managing different functions. Like fixing any jumble, software gets organized by putting like things in boxes—a process called "abstraction"—and it flourished in the coming years through techniques like object-oriented programming, which shapes the Internet's Java language.

Simonyi was at Xerox PARC in the 1970s when its scientists famously created the laser printer and the graphical user interface that the company failed to capitalize on. While there, Simonyi built the first word-processing program that let users see on their screens exactly what they were creating.

He wanted to get rich. Acting on a tip, in 1980, he flew to Seattle to meet a kid named Bill Gates, who had 30 employees. They hit it off and talked about how they might take over the world. Simonyi later designed Microsoft Word and the Excel spreadsheet program, and hired many of the company's early big thinkers. He became chief architect.

Intentional Software's offices look down on Simonyi's first office at Microsoft. He stares at them over a steel-and-fabric chair he has kept all these years. His dreams for Intentional were first hatched during his last years at Microsoft. The dynamic remains one of building up complexity, so programs can do more, then searching to control it with new kinds of abstraction. Only now the complexity is really big: Microsoft's Windows 2000 has millions of lines of instructions, far more than any one person can possibly understand. Worse, looking at any manageable chunk wouldn't let a programmer trying to adjust the software know very much about the overall design intention of the program—what it's meant to do.

**He wanted to get rich. Acting on a tip, he flew to Seattle TO MEET A KID NAMED BILL GATES, who had 30 employees. They hit it off and talked about how to take over the world.**

An early pursuit at Intentional Software is so-called aspect-oriented programming, which focuses on improving those group interactions—somewhat like how basketball coaches develop individual skills and team-passing for good overall ball movement. AOP can program in one area and, using a "weaver" that moves through the program, adjust potentially thousands of relevant points in a big program.

The company also draws on generative programming to automate some parts of code writing and on intentional programming, which captures a programmer's initial design plans as code, in a more natural form than binary algebra. The intentions can then be stored and reused for efficiency and refinement.

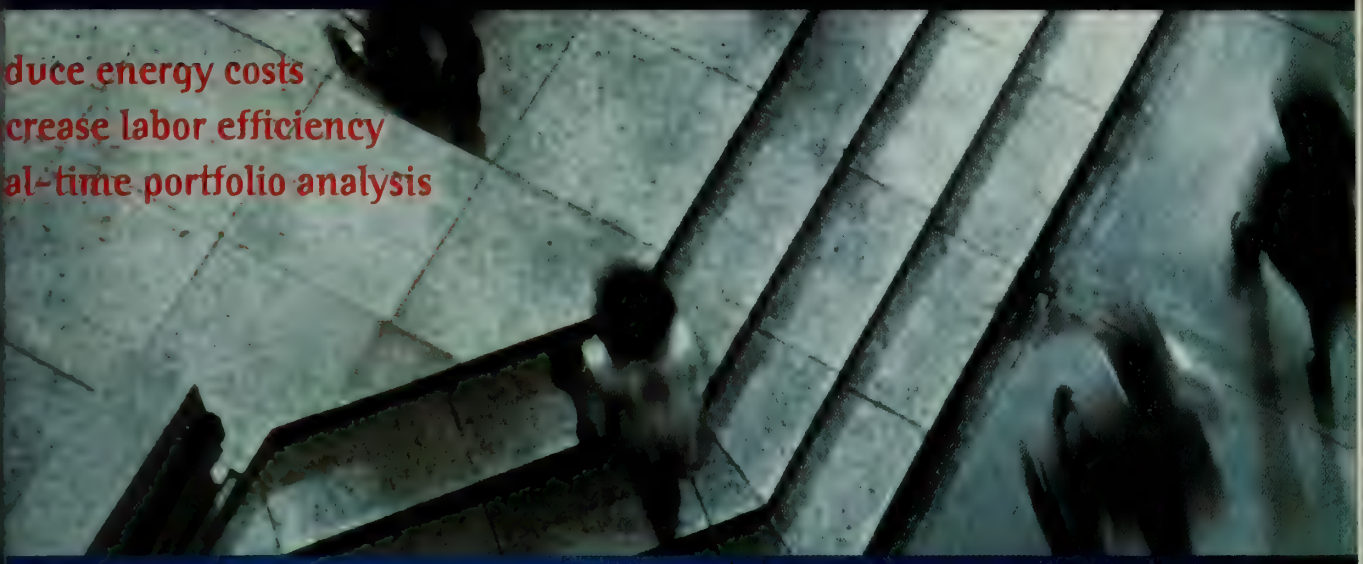
Ultimately this bag of tools may hone a software package down to its minimum number of steps. "Only as complicated as it has to be—no more," Simonyi insists. The real boon will be software design so close to the way people actually communicate that programmers can more easily write what regular people want out of their software. Much in the way the phone system migrated from operators hand-switching every call to users dialing directly, Intentional Software could let a marketing executive create the code needed for a product campaign with just minimal mediation from a programmer.

All this is a long way off, and the first products will be aimed at software-development types; Simonyi hints at contacts with defense and retail companies as well. Simonyi says he couldn't bring such a speculative package into Microsoft: "It will start out as too small a thing for a big company, and they can't afford the p.r. risk if it fails." With a somewhat different spin, top Microsoft managers say privately that they doubt Intentional would work.

Simonyi's team includes Gregor Kiczales, who developed aspect-oriented programming during his PARC stint. Much of the rest of the staff is in Budapest, allowing the company to work 24 hours a day. "I've got one guy—he was number one in the country in both math and physics in the same year," Simonyi brags. And that was in Hungary.

They had better be good, because plenty of others are vying to remake computing. James Gosling, the Sun Microsystems engineer who devised Java, has a project called "Jackpot," aimed at creating a common translator for the many software languages now in use. Tim Berners-Lee, who played the greatest role in creating the World Wide Web, is now devising "the semantic web," a kind of intelligence to rest atop his creation.

Simonyi still likes his chances: "I've got the biggest damn opportunity in software, and software is still the biggest damn opportunity in the economy." F





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# Brave New World

**WILL WRIGHT'S videogame is a first big step into a future where a computer will analyze you and reprogram itself to keep you intrigued—and trapped.**

BY MONTE BURKE

The future of entertainment has little to do with strapping yourself into a chair and putting on virtual reality headgear that transports you out of this world. It's very much centered on Earth and revolves around your life as you know it—or can imagine it. While you can't yet buy books or movies that reflect your proclivities, aspirations, inhibitions and fears, you can grab a hot videogame that allows you to create characters and develop your own plot lines and outcomes.

Yes, everyone has heard a great deal lately about The Sims (at 8 million units sold, the best-selling PC videogame of all time) from Electronic Arts. And about its creator, Will R. Wright, a slim, bespectacled 41-year-old who will introduce an online version this month, just in time for Christmas. All but neglected in the rush of publicity are the implications, good and bad, of a game that allows the player to act, in effect, like God—fashioning people out of nothing, imbuing them with specific characteristics, providing situations and decisions that have consequences large and small. "There really isn't anything out there like it," says Wright. He has certainly impressed the opposition. "The Sims is something that has the real potential to change the way we play games," says Peter Moore, president of Sega USA, one of EA's staunchest rivals. And once it hits the Web, the game will take a primitive, but impressive, step into a brave new world where computers will watch and analyze your preferences and habits and reprogram themselves accordingly.

On the surface, at least, The Sims is a surprisingly simple game, relatively thin on motion and Doomlike violence. Players invent their own simulated characters (hence, "sims")—choosing gender, personality, physical appearance, job, house, car, appliances and so forth—that live in a neighborhood with other sims and interact with them. Using clicks of the mouse, you pick from a finite number of personality traits; you can download from the Web a virtually infinite number of physical aspects, from looks to clothes; your character can resemble Britney Spears or Queen Victoria, Marilyn Manson or Bill Gates. You put your characters into day-to-day situations, then either sit back and watch them work out their

THOMAS BROENING FOR FORBES

own decisions or intervene, determining, for example, if your sims eat, help the kids with their homework or flirt with a neighbor. (Kissing is as passionate and explicit as the game gets.) Take a more hands-off approach and there may be "serious" consequences: Fail to provide food, and your sim will become grumpy, perhaps even die; without a trip to the bathroom, a sim will pee on the floor. It's the outcome of these trivial decisions that makes up the game. For example, if you've created an upwardly mobile sim, you'd better make sure he gets a good job. A lazy sim probably requires a large-screen TV to be happy. Wright has programmed a degree of free will into sims, but the player is the real demiurge behind the scenes.

Unbuttoning your inhibitions: The Sims lets you create your own characters.

Wright sees The Sims as a prosthetic for our own imaginations, amplifying creative impulses as a car is a souped-up extension our legs (and personalities). "You can get a good sense of what a player's ideals in life are by watching how they play," he says. "Are they trying to be successful financially, trying to fall in love or flirt, or just spending all their time building a hot tub on the back deck? It's a reflection of their vision of happiness." Since the game was introduced two years ago, players have created over 1,000 Web sites to show off their characters and trade "skins" (traits like clothes, hair and the like), and have downloaded a huge amount of content into their own games. "We just sort of put it out there, and people tailored it to their own likes and dislikes," says Wright.

This sort of customization takes a great leap forward in the online version, which provides many more choices for players. Another big difference: Instead of playing the game with other computer-controlled characters, you will be meeting other sims who are controlled by real people in a "virtual sandbox." You can create a sim that's a true reflection of who you are or your ideal version of yourself—even your evil twin.

Using a central database, Wright will also be able to make subtle and dramatic changes to the game as it is played over time. A war in Iraq might send a current of anxiety—or testosterone—through the neighborhood and change its dynamics. He can also introduce change on a whim—say, drastically lower housing prices, gauge players' responses (from rage to relief) and adjust the dynamics of the game accordingly. It's a crude step in the direction of a game that can eventually become so customized to the likes and dislikes of individual players that no two versions will look the same.

In the not-so-distant future, Wright speculates, the cyberagent and the customized computer will merge to become a moderator between two real people collaborating with their imaginations. Someday perfect strangers, each wearing their personalized databases, will encounter one another's digital fantasies—the cyberversion of two dogs sniffing each other out.

All of this from a playful adult whose title on his business card is "metaphorical cartographer." Growing up in Georgia and Louisiana, Wright was a kid who liked to build model airplanes. He spent five years in two colleges, studying aviation, mechanical engineering and architecture, but never bothering with a degree. "I programmed computers and played a lot of games," he recalls. "I figured I'd better try to make a living at it." In 1981 he moved with his wife to the Bay Area, which put him in the middle of the infant cyber phenom.

Four years later he came up with the idea for SimCity, in which players designed their own cities. "I wanted it to be a game with no end, like an Erector Set," he says. When he took it to Broderbund software, he was told to turn it into a game that could be won or lost. Wright refused and founded his own company—Walnut Creek, Calif.-based Maxis—with Jeffrey Braun, a software salesman. They published SimCity in 1989; it was a hit. SimEarth, SimFarm and SimCopter followed.

SimAnt, a game in which players design their own complex ant colonies, is based on the books of Harvard biologist Edward O. Wilson. Around that time he was also reading *A Pattern Language*, by Christopher Alexander, an urban theorist who pushed for a new architecture that served various aspects of human behavior, rejecting the arbitrariness of present-day offerings. Wright connected the two disparate works and thought, why not design a game that involves interaction among people from the ground up? The result was The Sims.

Downside: the potential for addiction. "The idea that you could have a system that's constantly trying to find your weak spots and catering to them with an aim to draw you in and make you stay is scary," he says. That and the chilling prospect that real people start living vicariously through their cyberselves. F

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# TECHNOLOGY

## PDAs, Connected and Not

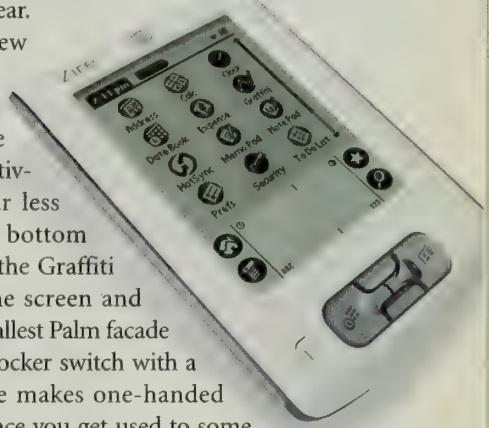
DESPITE ALL THE HOLIDAY SELLING HOOPLA, THERE are really only two kinds of pocket computers on the market: connected and disconnected. Connected devices like smartphones and Research In Motion's BlackBerrys can access e-mail and the Web without s. Disconnected models, including the vast majority of s, get their data fixes mostly via cables hooked up to par- computers. There are arguments for both types, and there's good news: Prices are dropping sharply.

Palm's cheap new Zire is the doyenne of disconnectedness. he hitherto unheard-of price of $99, it's as bare-bones as any n ever sold. There's no upgrade path, so what you see is t you get. The connector sn't work with outboard ssories like keyboards, and e's no way to add memory he basic 2 megabytes. The comes with cables rather a cradle. The screen lacks r and a backlight. Two of original four buttons have eliminated.

Still, beneath its white case and rubbery blue cover, this slim package does everything the original Palm Pilot did and more. It can store thousands of contacts and a very busy calendar, and it synchs with both its own desktop software and with Microsoft Outlook. It may not run the biggest programs, but aside from a choppy installation process on Windows XP and users' need to learn the Graffiti handwriting system, it works well. And if you happen to lose it, you can replace it by shedding a C-note rather than a tear.

**Connected handhelds let you get at your e-mail and the Web without wires. Disconnected models are mostly fancy organizers.**

At $499 the new Tungsten T is a different beast entirely—a smaller, fancier one whose limited connectivity translates into far less value. A panel at the bottom slides open to reveal the Graffiti typing area below the screen and closes to create the smallest Palm facade yet. A new four-way rocker switch with a button in the middle makes one-handed navigation possible once you get used to some odd conventions.



A new backlit color screen takes a nod from Sony's Clié models in quadrupling resolution to 320-by-320 pixels—though the system and many applications still use clunky fonts that look only marginally better on the new screen than the old. But the screen definitely helps programs like Documents to Go, which has always done a far better job of working with Microsoft Office documents than Microsoft's own Pocket PC counterparts and can now display fonts more crisply and accurately.

The Palm Universal Connector on the bottom hooks up to existing accessories and new ones like a folding keyboard even slimmer than

**Left: Palm's slim, collapsible Tungsten T with optional keyboard unfolded. Right: Palm's bare-bones Zire.**

previous models. There's a built-in microphone that works with voice-recording software; a version of RealOne Player is promised for fans of digital audio. And this is the first device to run the new Palm OS 5.0 operating system. Although it is compatible with many older applications, some will require upgrades.

But the wireless feature built into this unit, alas, is the hapless Bluetooth, rather than the far more popular and useful Wi-Fi. That limits it to communicating via the still relatively rare Bluetooth-enabled phones, laptops and other devices. The Secure Digital slot should one day make Wi-Fi cards an option, but for now they're unavailable. And $500 for this unit seems ridiculously high in a world where you can buy truly connected smartphones in several flavors (FORBES, *Sept. 16*) for the same price—or less.

**Above: Dell's beefy, versatile Axim X5. Right: HP's svelte iPAQ Pocket PC h1910.**

Or you could get a couple of units of the cheapest Pocket PC ever offered: the Dell Axim X5, which costs as little as $199 after rebates. I tested a $299 model, which comes with a faster processor, more memory and a cradle instead of cables but is otherwise identical.

The major drawback of these price-busters is their size: Compared with the Palms and other late-model Pocket PCs, they seem downright beefy. But thanks to two slots, one for Secure Digital memory media, the other for Compact Flash, they are potentially as versatile as any pocket computer ever made.

## Expansion slots let Dell's big, new Pocket PC link to wireless networks; HP's slim new iPAQ is essentially deaf to the world.

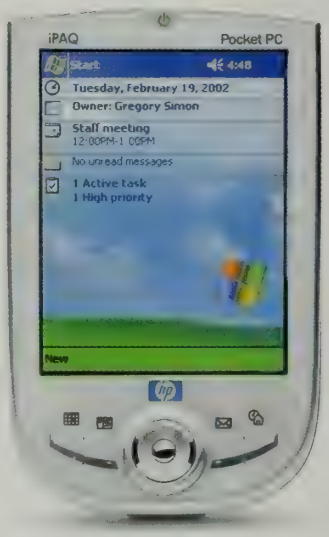
That Compact Flash slot is the Axim's path to connectedness. I plugged in a $70 Linksys WCF12 Wireless Compact Flash card, and suddenly—well, more like eventually, since it took considerable fiddling with software settings hidden hither and yon—I was surfing the Web and collecting e-mail via my home wireless network. Want wider coverage? Sprint has just begun offering a $230 (not counting service) Compact Flash unit called the PCS Connection Card Model CF2031. It uses Sprint's national Vision network for data and even lets you plug in an earphone for voice calls. The hitch is that its outboard battery is twice as big as the card itself.

The Axim's 240-by-320-pixel backlit screen is sharp and reasonably bright. The lithium-ion battery is removable, a boon for those who subject their handhelds to constant use. A folding keyboard is promised shortly.

Though the four-way switch on the front panel and the two-way rocker on the side are designed to make one-handed operation easier, they often seemed imprecise, overshooting or undershooting intended selections. There's no integrated cover to protect the screen; the leather carrying case lacks a belt clip and makes the unit even bulkier.

And Microsoft's Pocket PC software remains shamefully dopey, not to mention slow. If you pick up standard POP3 mail with the handheld, the software can't synch it with your desktop Outlook folders. The pocket version of Office still routinely destroys desktop documents' original formatting.

Still, thanks to those built-in slots, $199 buys you a unit that's relatively future-proof. If you're willing to put up with the drawbacks, there's no reason to pay more.




Hewlett-Packard will try to seduce you anyway. Its cute $299 iPAQ h1910 is the smallest Pocket PC I've seen. Though its screen is the same size as the Axim's, it's clearly brighter. The unit weighs just 4.23 ounces compared with the Axim's 6.9, and it takes up not much more than half the Axim's space. It comes with largely the same software as the Dell models and, as with the cheaper Axim, cables rather than a cradle. It, too, has a removable battery.

Unfortunately the iPAQ suffers from permanent disconnectedness. Its Secure Digital slot lacks the feature known as Secure Digital Input/Output (SDIO), which means it's limited primarily to memory and doesn't work with devices like cameras and network cards. The iPAQ is essentially as deaf to the world as the $99 Zire. The unit may be charming, but it's a bad deal.

If a disconnected PDA meets your needs, get the Zire; you won't have to mourn when you eventually decide to toss it in the trash. If you long for connectedness, be aware that the next big wave of PDAs is likely to have Wi-Fi built in, as Toshiba's Pocket PC e740 already does—but at a far lower price than Toshiba's $599.

For now, a truly connected PDA should accept Compact Flash adapters for Wi-Fi and other networks as the Axim does—or better still, be inside your phone and come with a built-in thumb-typing keyboard. Hello, Handspring Treo.

Forbes.com | Stephen Manes (steve@cranky.com) was cohost of *Digital Duo* and has been covering technology for nearly two decades. Visit his home page at www.forbes.com/manes.

# Michigan

ATE OF INNOVATION

RT III IN A SERIES: FOCUS ON SMARTZONES℠

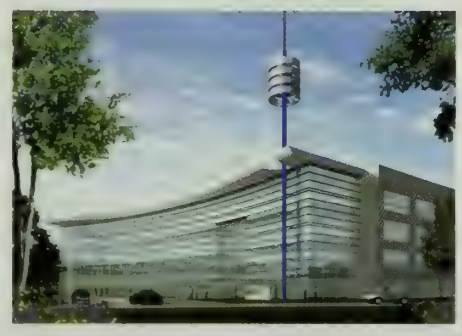
## Michigan, Technology Is Job One

ry Eckhoff

ove over Silicon Valley. Michigan is making a name for itself in gy, and it's not just IT that's steal- now.

last five years, Michigan has as a leader in life sciences, alter- ergy and advanced manufacturing ng technology clusters. Its new nes℠ program will accelerate this lichigan SmartZones are bringing versities, researchers, entrepre- enture capitalists and workers They also have helped secure 's reputation as the nation's top location for five years running, g to *Site Selection* magazine.

elieve we can stimulate innovative, economic development across with SmartZones as significantly t did at the start of the last century automobile industry," says Doug president and CEO of the Michigan Development Corporation (MEDC). an's 11 SmartZones were created with funding from the MEDC and y to use taxes captured from the within the SmartZone to support ture and ongoing operating costs. ing is being used for infrastructure, te and a variety of publicly owned facilities, including business incuba- nferencing space, telecommunica- R&D labs. The funds also pay for g services and accelerator programs. Zones are designed to bring togeth- minds in an environment that can



**The Michigan Information Technology Center is being built in the Ann Arbor/Ypsilanti SmartZone™.**

accelerate the commercialization of ideas into the marketplace. "By having each SmartZone affiliated with one of Michigan's four-year universities, we will create the ideal setting to spur start-ups and a whole new generation of entrepreneurs," says the MEDC's Rothwell. Significant activity has already begun at SmartZones across Michigan. For example, the Kalamazoo SmartZone is anchored by the Western Michigan University Business Technology and Research Park (WMU BTR), which hopes to attract companies in life sciences, IT and advanced engineering and will house a 58,000-square-foot innovation center complete with business incubator and accelerator programs. The center will open in early 2003. WMU's new College of Engineering and Applied Services is under construction as well, while a paper and printing research facility recently opened nearby. A handful of new companies in life sciences, fluid handling systems, environmental engineering and IT and knowledge management will comprise the BTR's early tenants.

The Ann Arbor/Ypsilanti SmartZone will be focused on IT, nanotechnology and alternative energy, and envisions itself as a virtual business incubator that will capitalize on the region's fourth-place national ranking in business formation.

One of this SmartZone's major attractions will be the Michigan Information Technology Center, a 100,000-square-foot facility containing incubator, flexible office and lab space for start-ups. Other tenants will include Internet 2, a private-public sector partnership dedicated to creating the next generation of high-speed Internet, offering speeds up to 100 times faster than the current Internet, and Merit Network Inc., Michigan's leading provider of advanced Internet services for research and education.

While SmartZones are not the only locations for doing business in Michigan, they do provide a nucleus where collaboration and a high-tech workforce, as well as access to high-tech support and amenities, are easy to find. This strategy has produced impressive early results: 24 new companies plus $120 million in private investment to date.

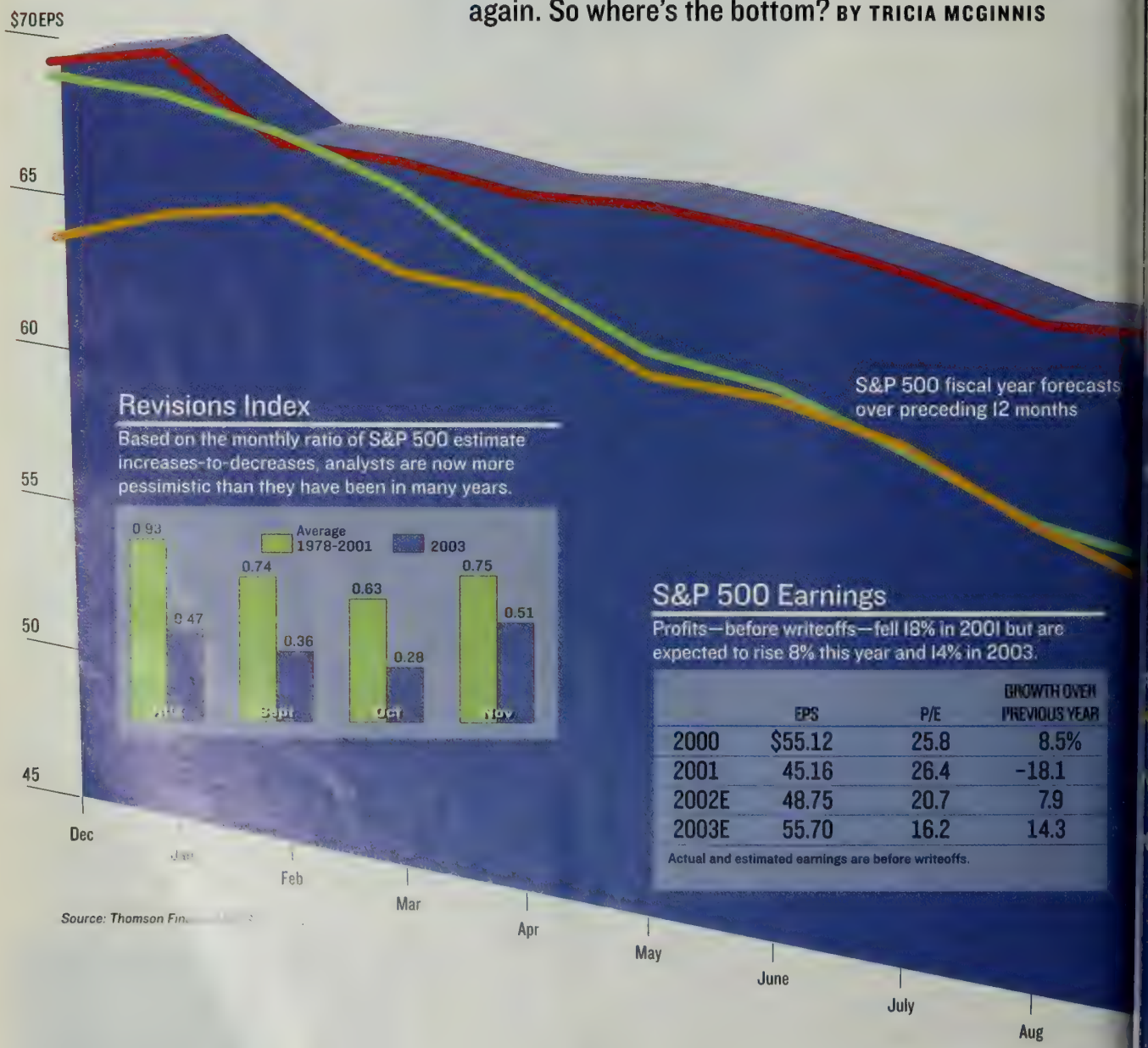
"Michigan has a history of raising the bar when it comes to innovative economic development. Our Renaissance Zones, Michigan Technical Education Centers and Brownfield Redevelopment program are the first initiatives of their kind and have been copied by other states," says Rothwell. "We believe SmartZones will continue that innovative reputation, as well as aid our state in gaining greater national and international recognition as a center for technological advancement."

**For more information on Michigan's SmartZones, please contact the Michigan Economic Development Corporation at 800-946-6829 or visit www.michigan.org.**

MICHIGAN SMARTZONE℠

# The Earnings Outlook

The sluggish economy has forced security analysts to cut their expectations of corporate earnings again and again. So where's the bottom? BY TRICIA MCGINNIS




| | EPS | P/E | GROWTH OVER PREVIOUS YEAR |
|---|---|---|---|
| 2000 | $55.12 | 25.8 | 8.5% |
| 2001 | 45.16 | 26.4 | -18.1 |
| 2002E | 48.75 | 20.7 | 7.9 |
| 2003E | 55.70 | 16.2 | 14.3 |

Actual and estimated earnings are before writeoffs.

ecurity analysts may be Wall Street's perennial cheerleaders, but even they have had to put away the pompoms during this prolonged economic slowdown. Analysts are now predicting only an 8% increase in S&P 500 profits in 2002, or earnings of $49 per S&P before writeoffs. That's better than last year's 18% drop, year ago these seers were predicting a 15% gain during And, if you don't want to be depressed, don't even look at ottom line after writeoffs are subtracted. Standard & s expects $31 for that number in 2002.

ow will 2003 shape up? Analysts are now forecasting a earnings gain for the S&P 500; back in April, 21% growth xpected. And analysts' recent downward estimate revi- are overshadowing their upward revisions to a greater t than they have historically *(see chart opposite)*.

ith earnings estimates in such a volatile state, how can tors profit from this information? One outfit that tries to out the signals from all this estimate noise is StarMine, n looks at the spread between consensus earnings forecasts he average forecast of just those analysts with the best ds *(see box below)*.

ake a look at Dow Jones & Co., publisher of the *Wall Street al*. After a weak 2002 (the general expectation is for a 56 cents a share in net), the company is supposed to rebound smartly next year. How far? The consensus forecast calls for 2003 profits of 94 cents a share, but the smartest security analysts are predicting $1.04. A positive earnings surprise of that magnitude, if it comes through, should do good things for the stock.

On page 356 we pick apart the expert opinions for three sectors: biotechnology, food and home construction.

- **Analyst Agreement** is ranked on a scale of 1 to 5, with a 5 signaling almost complete agreement among analysts.
- **Instinet's Earnings Evaluation Rank** scores companies on a scale of 1 to 10 for past earnings surprises, earnings revisions and expected earnings growth. A rank of 9 or 10 signals bullish sentiment, while a 1 or 2 is bearish.
- **Barra Risk Factor** can help predict a stock's price sensitivity to missing or beating its consensus forecast or to changing its earnings guidance (the public hints from the company about coming earnings numbers). This factor projects likely stock price volatility and is based on more than 40 components such as stock turnover rate, earnings variability, senior debt rating and historic earnings growth. The scale is from 0 to 100, with 100 indicating the greatest volatility relative to the overall stock market.

Similar data for an additional 12 industrial groups can be found at forbes.com/forecasters. F

## Stargazing

Consensus earnings estimates—the average forecasts from all the analysts—are widely available through the Thomson Financial/IBES system and thus tend to be incorporated in the prices of stocks. How do you get an edge in stock picking? Find out which analysts are the best and use their forecasts rather than the consensus.

StarMine, a four-year-old research boutique in San Francisco, has made a specialty of analyzing the analysts. Working with Thomson, it collects earnings estimates, revisions and recommendations on 5,500 U.S. companies from 3,500 analysts. It compares analysts' forecasts with companies' actual results and matches stock performance against the analysts' buy and sell recommendations. The top 32.5% of the profession get four or five stars, and their forecasts are tracked separately.

Sometimes the top stars line up with their less luminous peers. In the semiconductor sector, for example, 2003 forecasts for International Rectifier and STMicroelectronics come out the same whether you use just the best analysts or the whole lot. But sometimes there's a wide spread—and in a volatile stock, a difference of a nickel a share off the consensus forecast can mean a big swing in a stock price when earnings come out. Here are six companies with significant spreads between consensus and four- and five-star forecasts. —*T.M.*

| COMPANY/BUSINESS | RECENT PRICE | 2003 ESTIMATED EPS | |
|---|---|---|---|
| | | CONSENSUS | TOP ANALYSTS |
| Agile Software/internet software | $8.36 | –$0.18 | –$0.36 |
| Dow Jones & Co/publishing | 40.75 | 0.94 | 1.04 |
| HJ Heinz/food processing | 34.68 | 2.53 | 2.15 |
| Landstar System/trucking | 51.00 | 3.24 | 3.42 |
| Nextel Partners/wireless services | 7.05 | –0.66 | –0.57 |
| Whole Foods Market/supermarkets | 50.55 | 1.98 | 1.66 |

Prices as of Nov. 20. *Sources: StarMine; FT Interactive Data, Thomson Financial/IBES and Multex via FactSet Research Systems.*

# The Skinny on 2003

Here's the outlook for big biotechnology, food and home construction stocks. The experts are saying that home building will remain hot, but biotech could see a still bigger earnings rise.

| COMPANY | RECENT PRICE | ESTIMATED EPS 2002 CONSENSUS | ESTIMATED EPS 2003 CONSENSUS | ESTIMATED EPS 2003 TOP ANALYSTS[1] | INSTINET EARNINGS EVALUATION RANK[2] | CONSENSUS EXPECTED EPS GROWTH 2002-03 | CONSENSUS ESTIMATED P/E 2003 | CONSENSUS ANALYST AGREEMENT ON 2003 ESTIMATE[3] | BARRA RISK FACTOR[4] | LATEST 12-MONTH SALES ($BIL) |
|---|---|---|---|---|---|---|---|---|---|---|
| **BIOTECHNOLOGY** | | | | | | | | | | |
| Abgenix | $8.69 | –$1.53 | –$1.69 | –$1.49 | 6 | NM | NM | 3 | 77 | $0.03 |
| Affymetrix | 28.10 | 0.12 | 0.45 | 0.47 | 10 | 269% | 63 | 2 | 63 | 0.28 |
| Amgen | 46.82 | 1.36 | 1.64 | 1.65 | 7 | 21 | 28 | 3 | 34 | 4.88 |
| Biogen | 43.49 | 1.57 | 1.70 | 1.69 | 5 | 8 | 26 | 3 | 47 | 1.13 |
| Chiron | 40.87 | 1.29 | 1.45 | 1.47 | 8 | 13 | 28 | 3 | 30 | 1.14 |
| Genentech | 35.73 | 0.92 | 1.08 | 1.07 | 3 | 17 | 33 | 3 | 41 | 2.43 |
| Genzyme | 30.70 | 1.08 | 1.38 | 1.40 | 8 | 28 | 22 | 3 | 57 | 1.05 |
| Gilead Sciences | 36.27 | 0.37 | 0.76 | 0.70 | 9 | 111 | 48 | 2 | 52 | 0.40 |
| IDEC Pharmaceuticals | 38.54 | 0.81 | 1.13 | 1.14 | 9 | 40 | 34 | 3 | 54 | 0.36 |
| ILEX Oncology | 7.03 | –1.50 | –1.48 | –1.45 | 6 | NM | NM | 2 | 78 | 0.03 |
| Medarex | 3.99 | –0.95 | –1.09 | –1.05 | 2 | NM | NM | 2 | 78 | 0.05 |
| Techne | 32.80 | 0.64[5] | 1.10 | 1.12 | 7 | 60 | 30 | NA | 42 | 0.14 |
| **FOOD** | | | | | | | | | | |
| 7-Eleven | 8.05 | 0.67 | 0.69 | 0.75 | 6 | 4 | 12 | 3 | 48 | 8.[illegible] |
| ConAgra Foods | 24.69 | 1.62 | 1.76 | 1.80 | 8 | 9 | 14 | 3 | 2 | 27.1 |
| Dean Foods | 38.12 | 2.78 | 3.05 | 3.06 | 9 | 10 | 13 | 5 | 12 | 8.6 |
| Fleming Cos | 5.56 | 1.26 | 1.72 | 1.74 | 5 | 36 | 4 | 2 | 84 | 16.6 |
| HJ Heinz | 34.68 | 2.49 | 2.53 | 2.15 | 2 | 2 | 14 | 3 | 4 | 9.6 |
| Kellogg | 34.47 | 1.73 | 1.89 | 1.89 | 5 | 9 | 18 | 5 | 3 | 8.5 |
| Kraft Foods | 37.40 | 2.03 | 2.25 | 2.27 | 7 | 11 | 16 | 5 | 5 | 34.1 |
| Kroger | 15.10 | 1.67 | 1.79 | 1.78 | 3 | 7 | 8 | 3 | 23 | 51.1 |
| Safeway | 21.57 | 2.76 | 2.51 | 2.53 | 3 | –9 | 9 | 3 | 24 | 34.8 |
| Smithfield Foods | 17.27 | 0.99 | 1.78 | 1.71 | 1 | 79 | 10 | 2 | 27 | 7.7 |
| Sysco | 31.25 | 1.01[5] | 1.18 | 1.18 | 7 | 17 | 27 | 3 | 5 | 23.9 |
| United Natural Foods | 24.00 | 0.89[5] | 1.19 | 1.19 | 6 | 34 | 20 | 4 | 39 | 1.2 |
| **HOME CONSTRUCTION** | | | | | | | | | | |
| Beazer Homes | 60.58 | 10.74[5] | 12.11 | 12.18 | 9 | 19 | 5 | 3 | 30 | 2.4 |
| Centex | 46.26 | 8.19 | 9.17 | 8.78 | 8 | 12 | 5 | 3 | 19 | 8.1 |
| Lennar | 52.45 | 7.36 | 8.10 | 8.27 | 7 | 10 | 6 | 3 | 20 | 6.6 |
| DR Horton | 18.10 | 2.87[5] | 3.38 | 3.34 | 6 | 18 | 5 | 3 | 21 | 6.7 |
| Hovnanian Enterprises | 32.35 | 4.35 | 4.67 | 4.60 | 9 | 7 | 7 | 4 | 43 | 2.3 |
| KB Home | 43.54 | 6.82 | 7.59 | 7.68 | 7 | 11 | 6 | 3 | 17 | 4.1 |
| MDC Holdings | 33.60 | 5.89 | 6.38 | 6.40 | 8 | 8 | 5 | 3 | 29 | 2.3 |
| NVR | 317.25 | 36.03 | 40.27 | 41.34 | 8 | 12 | 8 | 3 | 23 | 3.1 |
| Pulte Homes | 44.80 | 7.07 | 7.89 | 8.03 | 8 | 12 | 6 | 3 | 16 | 6.1 |
| Ryland Group | 36.55 | 6.09 | 6.73 | 6.65 | 8 | 11 | 5 | 3 | 33 | 2.1 |
| Toll Brothers | 19.65 | 2.88 | 3.23 | 3.35 | 7 | 12 | 6 | 3 | 26 | 2.3 |
| Standard Pacific | 23.74 | 3.58 | 4.09 | 4.30 | 6 | 14 | 6 | 2 | 29 | 1.1 |

**For additional estimate data on 12 other industries, go to forbes.com/forecasters.**

Prices as of Nov. 20. [1]Four- and five-star analysts. [2]Instinet Earnings Evaluation Rank captures the relationships among earnings surprises, estimate revisions, expected earnings growth and future share price changes. A rank of 9 or 10 is considered bullish, while 1 or 2 is bearish. [3]Level of agreement among analysts: A score of 5 means very high agreement and 1 means very low level of agreement. [4]Risk factor shows a stock's projected volatility relative to the overall market. A higher number means greater risk. Scale is from 0 to 100. [5]Actual.
NA: Not available. NM: Not meaningful. *Sources: StarMine; Barra Risk Factor Analysis; Instinet; FT Interactive Data, Thomson Financial/IBES and Multex via FactSet Research Systems.*

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# The Chips Are Down

**StarMine five-star analyst Mark FitzGerald was ahead of many of his peers when he boldly called a slowing long-term growth rate for the semiconductor business. His outlook for 2003 doesn't get any rosier | BY ARIK HESSELDAHL**

In December 2001 Mark FitzGerald, then a year and a half into his job as a semiconductor capital equipment analyst at Bank of America in San Francisco, sensed the end of the old world and the beginning of the new. As the chip industry was closing out the worst year in its history, FitzGerald saw little hope for the long-expected recovery that should be just around the corner.

Cycles in the chip business—and in the chip manufacturing equipment sector that supplies it—have always been extreme. But over two decades investors in chip stocks could always take comfort in a compound annual sales growth that averaged just below 15%.

"No more" was FitzGerald's message a year ago. The decades of predictable long-term growth punctuated by harsh boom-and-bust cycles were over. Annual sales growth of just 5% to 10% was more likely. "Back then," he says, "we were considered heretics for saying it."

Once unthinkable, FitzGerald's view is now pretty close to t conventional wisdom. Even the industry's flagship trade grou the Semiconductors Industry Association, is projecting avera revenue growth of 8% to 10% in the years to come.

FitzGerald thinks that chipmakers will continue to suffer 2003. Intel, which long preached a philosophy of spendi through the downturn, will probably trim capital spending 2003 to $3.5 billion from $4.7 billion for 2002. Advanced Mi Devices, whose founder and Chairman Walter J. Sanders coi the phrase "Real men have fabs," has plans to outsource so manufacturing in order to reduce capital costs.

Equally gloomy is FitzGerald's outlook for chip manufact ing equipment companies. Chipmakers are taking on two ca tal-intensive burdens at once: increasing the size of silicon wa

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d eats a peanut butter sandwich. When he's done, he

ds up his paper sack so it can be used again tomorrow.

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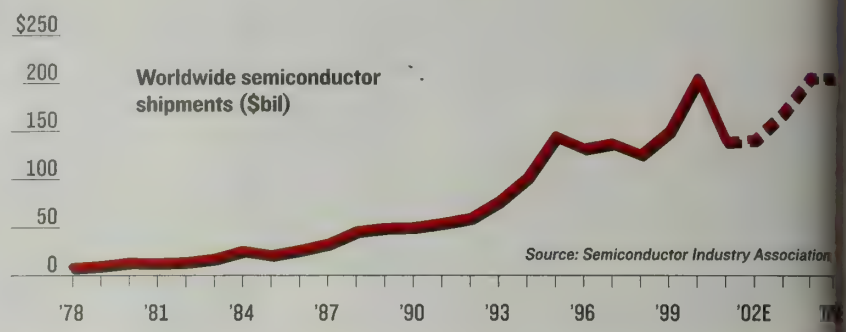
to 300 millimeters and decreasing the size of transistors on a chip. The cost of a new chip factory now runs about $3 billion.

FitzGerald has slashed his 2003 forecast for Applied Materials from the $1.03 a share he was expecting in May to 16 cents.

There are six companies that can afford to move to 300-millimeter wafers, FitzGerald says. Of those six, two are Taiwan's contract chip manufacturers, Taiwan Semiconductor and United Microelectronics, both of which will, in his view, stand to benefit from an industry-wide increase in outsourcing. F

## Semi Slowdown

Sales may recover, but growth rates will be lower.




## A Risky Bet

These semiconductor firms might be worth their steep prices if there were expectations for fabulous long-term growth. Analyst Mark FitzGerald of Bank of America in San Francisco has no such expectation.

| | | ESTIMATED EPS | | | CONSENSUS | | | |
|---|---|---|---|---|---|---|---|---|
| COMPANY | RECENT PRICE | 2002 CONSENSUS | 2003 TOP ANALYSTS[1] | INSTINET EARNINGS EVALUATION RANK[2] | ESTIMATED P/E 2003 | ANALYST AGREEMENT ON 2003 ESTIMATE[3] | BARRA RISK FACTOR[4] | LATEST 12-MONTH SALES ($BIL) |
| Advanced Micro Devices | $5.55 | -$1.81 | -$0.97 | 3 | NM | 1 | 83 | $3.0 |
| Amkor Technology | 4.96 | -1.65 | -0.28 | 5 | NM | 1 | 96 | 1.6 |
| Analog Devices | 29.81 | 0.28[5] | 0.87 | 2 | 38 | 3 | 51 | 1.7 |
| Applied Materials | 15.86 | 0.16[5] | 0.22 | 1 | 79 | 1 | 51 | 5.1 |
| ASML | 9.68 | -0.23 | 0.12 | 1 | 93 | NA | 74 | 4.4 |
| Broadcom | 17.65 | -0.20 | 0.19 | 1 | 98 | 1 | 77 | 1.0 |
| Cypress Semiconductor | 5.96 | -0.24 | 0.10 | 5 | 75 | NA | 77 | 0.8 |
| Fairchild Semiconductor | 13.97 | 0.22 | 0.48 | 4 | 29 | 2 | 68 | 1.4 |
| Infineon Technologies | 9.18 | -1.52 | 0.28 | 1 | 61 | NA | 67 | 5.0 |
| Intel | 19.15 | 0.49 | 0.59 | 1 | 31 | 2 | 48 | 26.6 |
| International Rectifier | 22.46 | 0.75[5] | 0.69 | 9 | 33 | 2 | 73 | 0.8 |
| KLA-Tencor | 39.82 | 1.10[5] | 0.61 | 1 | 63 | 2 | 47 | 1.5 |
| Lam Research | 14.11 | -0.71[5] | 0.03 | 6 | 470 | NA | 68 | 0.8 |
| LSI Logic | 6.80 | -0.12 | 0.27 | 2 | 27 | 2 | 74 | 1.7 |
| Maxim Integrated | 39.56 | 0.73[5] | 0.95 | 1 | 42 | 3 | 47 | 1.1 |
| Micron Technology | 14.59 | -1.51[5] | -0.68 | 4 | NM | 1 | 65 | 2.6 |
| National Semiconductor | 17.87 | 0.01 | 0.51 | 5 | 41 | 1 | 56 | 1.6 |
| Novellus Systems | 34.03 | 0.27 | 0.44 | 6 | 74 | 1 | 53 | 0.8 |
| Nvidia | 14.88 | 0.72 | 0.63 | 1 | 24 | 2 | 78 | 1.9 |
| STMicroelectronics | 23.37 | 0.48 | 0.76 | 10 | 31 | 2 | 51 | 5.9 |
| Taiwan Semiconductor | 8.32 | 0.17 | 0.22 | 4 | 33 | NA | 58 | 3.5 |
| Teradyne | 14.91 | -1.18 | -0.26 | 5 | NM | 1 | 67 | 1.1 |
| Texas Instruments | 18.42 | 0.18 | 0.34 | 1 | 66 | 2 | 53 | 8.0 |
| United Microelectronics | 4.42 | 0.06 | 0.10 | 1 | 49 | NA | 56 | 2.0 |
| Xilinx | 22.53 | 0.47 | 0.69 | 3 | 33 | 3 | 57 | 1.1 |

Prices as of Nov. 20. [1]Four- and five-star analysts. [2]Instinet Earnings Evaluation Rank captures the relationships among earnings surprises, estimate revisions, expected earnings growth and future share price change. A rank of 9 or 10 is considered bullish, while 1 or 2 is bearish. [3]Level of agreement among analysts: A score of 5 means very high agreement and 1 means a very low level of agreement. [4]Risk factor shows a stock's projected volatility relative to the overall market. A higher number means greater risk. Scale is from 0 to 100. [5]Actual. NA: Not available. NM: Not meaningful. *Sources: StarMine Risk Factor Analysis; Instinet; FT Interactive Data, Thomson Financial/IBES and Multex via FactSet Research Systems*

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# Tax Roulette

**The White House and Congress want to re-do the Internal Revenue Code. Here's how to play the odds on possible changes.** BY JANET NOVACK

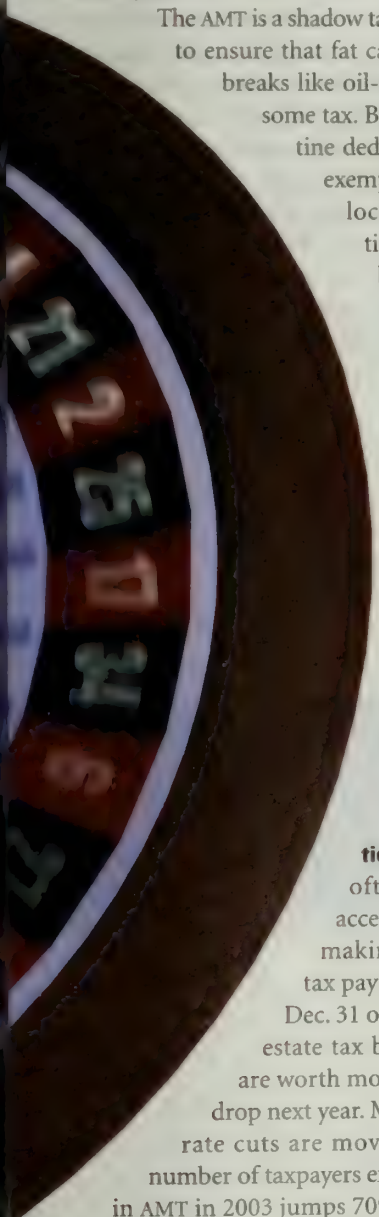
WITH TALK OF TAX CODE CHANGES BUBBLING IN Washington, Gerald Mandell, 67, is in tax-planning limbo. Does he gamble that the estate tax will end? Under current law the estate tax shrinks slowly through 2009, dies in 2010, then is resurrected in 2011. George Bush says he wants to make the elimination of the estate tax permanent. He has majorities in both houses of Congress, but there are four congressional elections and two presidential ones between now and 2011. Anything can happen.

Right now Mandell has been paying hefty money in case the levy sticks around: $17,000 in yearly premiums for a $2 million universal life policy. That's so two sons, who work in Mandell's Queens, N.Y. supermarket business, will have insurance proceeds (which aren't taxed) to satisfy estate taxes. Otherwise they might be forced to sell the company to pay the tax tab. Making matters worse, because low interest rates have undercut the policy's investment returns, Mandell must double his premiums to keep the insurance in force beyond 2005.

The permanent elimination of the estate tax is just one of a range of tax changes, including "simplification" schemes, an increase in the $3,000 capital-loss deduction and a reduction in the double taxation of corporate profits (say, with a corporate deduction for dividends paid) that are possible. At the least, tinkering of some kind is certain next year. Since 1997 Congress has made 1,159 changes in the tax code, by tax publisher CCH's count. With the law in such flux, planning is a gamble. Not planning, though, is a bigger risk.

Here are some strategies for playing the odds.

**fer income (if you're not in AMT).** Last year's $1.35 trillion tax layed the biggest breaks for the well off until later in the e. The four top tax brackets—now 38.6%, 35%, 30% and –are slated to drop a percentage point each in 2004 and to 33%, 28% and 25% in 2006. The cuts likely are safe for nd, should the Republicans get their way, may even take earlier. Bernard Kent, a PricewaterhouseCoopers financial ing partner, deferred some income this year after calculat- at waiting until 2006 increased the net present value of his t 25%. Before following his lead, Kent warns, weigh the at your employer will go out of business in the interim be sure you are not subject to the alternative minimum tax this year.



The AMT is a shadow tax originally designed to ensure that fat cats, blessed with tax breaks like oil-well depletion, paid some tax. But it also denies routine deductions for personal exemptions and state and local taxes and sometimes traps folks with big families or large capital gains. If you're paying the AMT this year, say because of a large capital gain, and are past the "exemption phase-out" ($346,000 or above in alternative minimum taxable income for a couple) then additional compensation is taxed at a 28% rate. Take it now.

**Accelerate deductions (if not in AMT).** It often makes sense to accelerate deductions by making a last 2002 state tax payment due Jan. 15 on Dec. 31 or by prepaying a real estate tax bill. The deductions are worth more now should rates drop next year. Moreover, if the 2006 rate cuts are moved up to 2003, the number of taxpayers expected to be caught in AMT in 2003 jumps 70% from 3 million to 5.1 million, according to the Urban-Brookings Tax Policy Center. Almost all the increase will be ong taxpayers earning $100,000 to $500,000, and an expect to lose some or all of their state and local tax and miscellaneous deductions.

If you're at risk, cram as many deductions into 2002 as you can without tipping yourself into AMT. (A tax pro or 2002 tax software will tell you how far to push this.) Conversely, if you're already stuck in AMT for 2002, put off paying local tax bills.

Note: Charitable deductions aren't lost in AMT, but they're usually worth more when you're not paying AMT.

**Max out retirement accounts.** The current pro-savings political consensus makes stuffing pretax dollars into your retirement accounts a safe wager; the extra 15% penalty tax on excess distributions from big retirement accounts, repealed as of 1997, seems unlikely to come back. But don't ignore the prospect that with the budget again in deficit and the baby boomers' retirement looming, tax rates could rise in the long run.

Might your tax rate be higher when you retire than it is now? If so, a Roth IRA has a big advantage over a traditional tax deductible IRA. Money going into a Roth isn't deductible, but withdrawals after five years and age 59½ are tax-free. (You can compare returns from a deductible versus a Roth IRA, using different tax rate assumptions, with the forbes.com Roth calculator.) Unfortunately, eligibility for a Roth begins to phase out at $150,000 in adjusted gross income for married couples.

**Follow the tax debate.** Don't react in knee-jerk fashion, but do keep an ear on the tax-cut talk for changes that could affect your investments or where you hold them. (Some Web sites in the box on p. 365 will help.) Something to watch for, says Mark Weinberger, Americas deputy vice chairman of Ernst & Young: a Bush Administration proposal for relief from the double taxation of dividends. Lehman Brothers tax analyst Robert Willens points out that this would make high-yielding securities such as preferred stock and bank and utility common stock much more popular. If you are going to buy such stocks, buy now before they get too expensive.

Also, a hike in the amount of capital losses that can be deducted against ordinary income would strengthen the case for holding bonds in your retirement accounts and individual stocks in taxable accounts.

**Make tax-free gifts.** A repeal of the death tax effective in 2003 is unlikely, says Weinberger. Given the many elections before 2010, the repeal of estate taxation may never happen. Hence continuing to transfer wealth now to the younger set makes sense. The trick is to avoid gift taxes. Remember, you can pay tuition or medical bills for anyone directly and can give $11,000 a year to each person you want, without the gifts counting against your lifetime $1 million exemption from gift and estate taxes.

Annual gifts can shift income, too. When you give stock, the recipient takes on your basis and acquisition date. If you've held a stock for more than five years and give it to a child 14 or older, he can sell it and (if his taxable income isn't above $27,950 in 2002) pay gains taxes at an 8% rate, versus the 20% you'd likely pay. (A younger child's unearned income above $1,500 is taxed at the parent's rate.) High-yielding stocks and bonds work well too—beginning this year, dependents 14 or older pay just 10% on the first $6,000 of ordinary income, including interest and dividends.

In addition, low interest rates make this an ideal time to use

JEFFREY OH FOR FORBES

such vehicles as grantor retained annuity trusts and charitable lead trusts. If the assets put in a GRAT appreciate faster than a set rate—4% a year for GRATs set up in December 2002—you pass on assets gift-tax free. If they don't, you keep the assets and are out only the attorney's fee. The interest rates you must charge on intrafamily loans (to avoid all sorts of tax complications) are also near historic lows—just 3.3% on a loan with a maturity of more than three and up to nine years, for example.

**Keep your insurance.** Fee-only life insurance adviser Peter Katt of Mattawan, Mich., suspects that the estate tax will be with us after 2010. "Class envy is not going to be permanently put in a box," he says. Anyway, he notes, under the present law when the estate tax is (however briefly) repealed, families that bought insurance to pay estate taxes may need it to pay capital gains once they start reallocating the inherited assets. In return for the 2010 repeal, the law limits the current step-up in basis that inherited assets get at an owner's death.

If you're buying insurance to cover estate taxes, consider a term policy that is convertible to permanent insurance or a no-load permanent policy, says J.J. MacNab, a Bethesda, Md. fee-only insurance adviser. Since a no-load policy isn't weighed down by big commissions, you won't lose your investment to surrender charges if you turn it in after a few years. Insurers selling higher-commission products are now offering "estate tax repeal" riders waiving such surrender charges if the tax goes away. Read the fine print: Some riders are riddled with conditions.

**Plan for your state's estate tax.** Until 2001 most states limited their estate tax to the "state death tax credit"—a part of the federal estate tax ceded to the states. In 2001 the feds got a top rate of 39% and the state at most 16% from a $10 million estate paying the top 55% marginal rate. But the 2001 tax act reduces the states' top share of an estate to 8% in 2003, 4% in 2004 and 0% in 2005. Meanwhile the feds' top rate rises to 41% in 2003, 44% in 2004 and 47% in 2005. Some tax cut.

So far 17 states and the District of Columbia have "decoupled" from the federal estate tax, meaning they've refused to reduce their rates and/or are not raising their estate tax exemptions along with the federal exemption, which went to $1 million this year and goes to $3.5 million by 2009. If you and your spouse have a net worth of $1.5 million to $5 million, this creates big planning problems, says Bruce Steiner of New York's Kleinberg, Kaplan Wolff & Cohen.

The standard plan in this asset range aims to preserve the estate-tax exemption of the first spouse to die, while making sure the survivor has enough to live on. You leave assets equal to the federal exemption to a "bypass" or "credit shelter" trust; the rest goes directly to your spouse. The trust can pay income—and

AT SOME POINT EVER

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ed, principal—to your spouse, but he or she dies, the principal goes e-tax-free to your kids, bypassing spouse's estate.

ppose you die in 2004 in New Jer- which has frozen its exemption at 000, and you leave the full $1.5 mil- ederal exemption to a bypass trust. estate will owe a $64,400 state tax ou could leave just $675,000 to the s, delaying the state bill, or avoiding mpletely if your spouse moves to la. Still, that might cost your family cessary federal taxes.

hat's the optimum amount to leave ypass trust? While you can't predict your surviving spouse or your 's executor may be in a better posi- to judge. So make your estate plan ble to allow for tax law changes. ons include a disclaimer trust, a Q- rust and a Clayton Q-Tip trust.

he disclaimer trust is an empty by- trust into which a surviving spouse disclaim" assets. The Q-Tip is a trust for the surviving spouse; using it gives an executor up to 15 months to divide the deceased spouse's assets into two piles—those that will eventually pass to the kids under the first spouse's estate exemption and those that will go into the surviving spouse's estate. With a Clayton Q-Tip, those assets that are picked to fund the first spouse's estate exemption are put into a bypass trust, which can give the surviving spouse more control over the assets than if they were left in the Q-Tip. F

## Best Tax Web Sites

Forbes BEST OF THE WEB

The Forbes Best of the Web reviews (www.forbes.com/bow) cover 3,500 sites. Here are some of our favorites on tax law:

- ▸ **www.turbotax.com**, from Intuit, offers tax news, information and calculators. Use the Tax Relief Estimator in the "free" tax tools section and click on "see detailed calculations" to get a rough idea of whether you're headed into AMT territory.
- ▸ **www.taxpolicycenter.org**, a new site from the Urban Institute and Brookings Institution, helps you handicap various tax cuts by showing costs and who benefits.
- ▸ **taxes.yahoo.com**, from Yahoo, is a well-organized gateway to other tax sites.
- ▸ **www.house.gov/jct**, from Congress' Joint Committee on Taxation, explains tax bills and posts tax law studies, including a three-volume treatise on complexity.
- ▸ **www.irs.gov**, the Internal Revenue Service's huge site provides all the forms and instructions covering current tax law, but has little insight into what lies ahead.


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# Four Simple Rules

DESPITE THIS FALL'S RUNUP, MUCH HAS CHANGED IN the current bear market, the worst decline since 1929-32. Investors are a lot less wealthy. Some people have awakened to the idea that stock prices do not rise inexorably. And there's a lot of skepticism about the tech issues that got us into this mess. But one thing hasn't changed: bubble-era accounting.

This approach of business as usual is not good for you and it's not good for the market. As I detailed in my last column *(Oct. 28)*, companies continue to release dubious results under the rubric "operating earnings" or "pro forma earnings." These inventions use no consistent standard other than to toss out the problem items. Management can hype income by excluding costs on just about anything from payroll expenses to inventory write-downs to interest charges.

**We still just can't trust earnings, despite all the talk about reform. So here are some tips on other ways to gauge stocks.**

Scads of big companies, including Yahoo, Cisco, Qualcomm and Juniper Networks, blithely continue to play the operating earnings game the same way they did at the top of the bubble, even though this has cost investors trillions. A daunting 400 companies in the S&P 500 exclude significant ordinary expenses as defined by generally accepted accounting principles. For every dollar of earnings reported by S&P 500 companies, 36% would be excluded by GAAP in the 18 months ended June 30.

Standard & Poor's has tried to change the status quo for accounting standards, although no one can tell if its effort will take. Since GAAP isn't perfect—this method allows companies to ignore the cost of stock option grants, for instance—Standard & Poor's has come up with a concept called core earnings to factor in things like options and pension programs.

Don't expect the government to alter the landscape. The accounting lobby, with powerful support from the likes of Representative Michael Oxley, chairman of the House Committee on Financial Services, ignores the recent debacles and stands foursquare against truly reforming accounting standards. While the Oxley-Sarbanes law passed this summer took some baby steps toward reform, the central weakness of the system remains intact.

How strong is the accounting lobby? Very. Simply look at the disastrous attempts by the Securities & Exchange Commission (under exiting Chairman Harvey Pitt) to fill the top position at the new board that is to oversee the profession. Pitt originally wanted John H. Biggs of TIAA-CREF, who boasted strong accounting expertise, yet the industry pressured Pitt to switch to William H. Webster, who enjoyed an impeccable public record but had little accounting background. Webster quit when news broke of his service on the audit committee of insolvent U.S. Technologies, which is under investigation for fraud. The Webster imbroglio ended up costing Pitt his job and left the oversight board in disarray, just as the accounting firms prefer.

In the meantime, how can you protect yourself from the worst of the accounting devils still skulking around? Here are four simple rules that should help:

1) Ignore operating earnings. Companies also must report GAAP earnings, even if the analysts you read don't. Check out the news releases on their Web sites or their SEC filings.

2) Buy companies that have at least a ten-year record of earnings, and just as important, have not made radical changes in the nature of their operations. This rule is not bulletproof but it should steer you away from the Enrons and WorldComs.

3) Avoid companies that give large stock option plans to their managements. This practice puts management interests in conflict with those of shareholders; it motivates them to stretch earnings just long enough to sell shares and to run up huge option loads. And if internal earnings targets are met, executives often are rewarded with still more options.

4) Buy value stocks, which will keep you away from most of the phony accounting used to give the illusion of fast growth. These meet the above criteria and also have solid outlooks:

**British American Tobacco (17, BTI)** is one of the largest manufacturers of cigarettes internationally, with a trailing P/E of 12, yield 5.3%; **General Electric (27, GE)**, P/E 18, yield 2.6%; managed care provider **Humana (10, HUM)**, P/E 9; **May Department Stores (24, MAY)**, among the largest domestic department store chains, P/E 13, yield 3.8%.

Bank stocks look good, so buy **Bank of America (69, BAC)**, P/E 12, yield 3.7%; **Citigroup (38, C)**, P/E 12, yield 1.9%; **KeyCorp (26, KEY)**, a major regional bank holding company, P/E 20, yield 4.6%; **Wachovia (35, WB)**, which gained heft with last year's First Union merger, P/E 14, yield 3%; **Washington Mutual (36, WM)**, P/E 12, yield 3.1%, the nation's largest thrift.

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**David Dreman** is chairman of Dreman Value Management of Jersey City, N.J. His latest book is *Contrarian Investment Strategies: The Next Generation*. Visit his home page at **www.forbes.com/dreman**.

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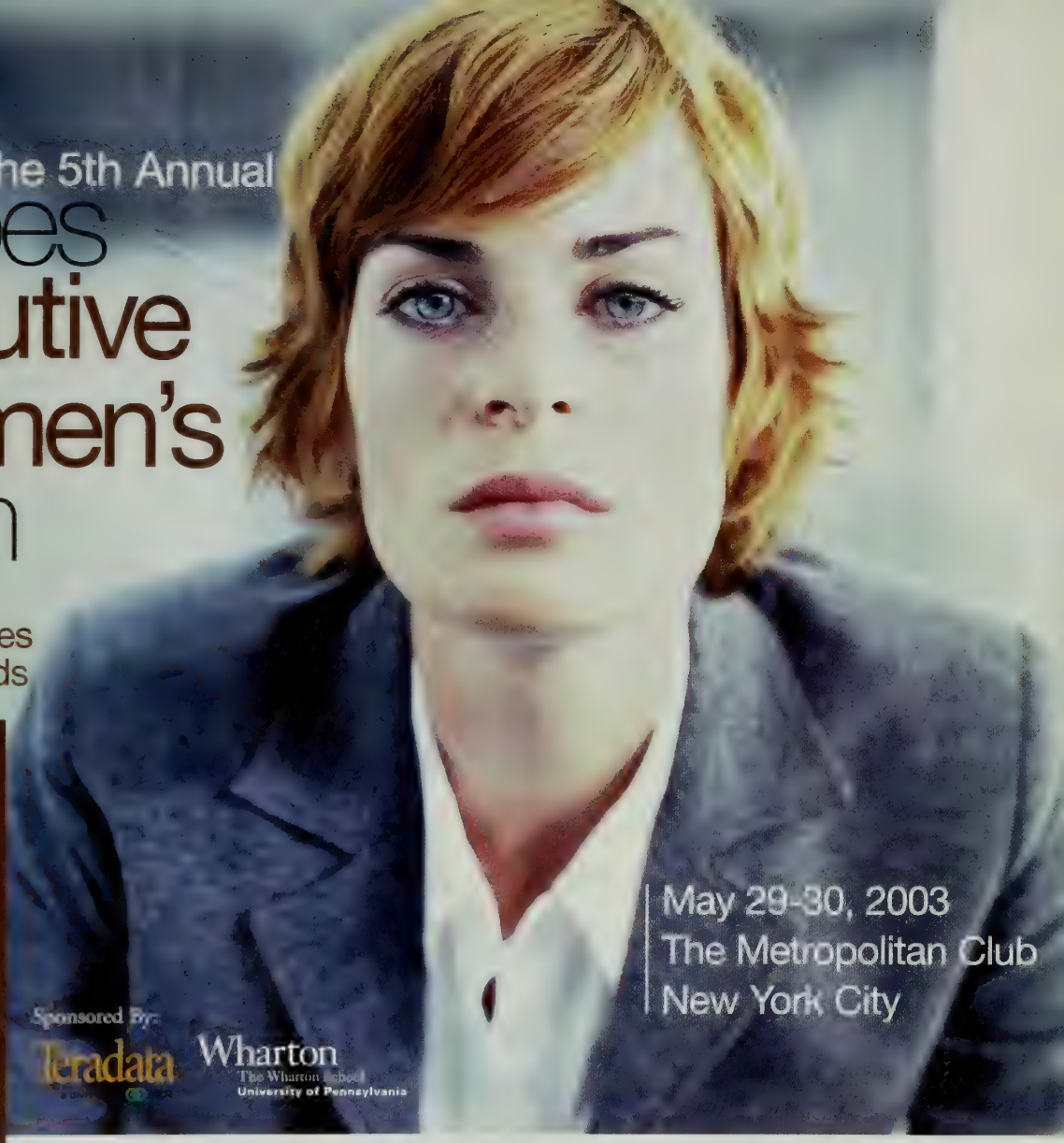


Greed is not good. The fallout from scandals plaguing corporate America continues to spread to investors, to consumers, and to the economy. The implications are immense: if all leaders put the good of their companies ahead of their own interests, would the world be a better place? Doing the right thing is good for business. If more women were in top spots, what would be the difference? Would there be as many Enrons, WorldComs, Global Crossings, Tycos and Adelphias? Maybe not. Will the backlash against corporate malfeasance create a culture of honesty? Can women executives benefit from and lead this change? We certainly hope so. The 2003 Forbes Executive Women's Forum comes at a critical time for business, when leadership is at a crossroads and the future of capitalism could be at stake.

*To register contact Jessica Kouvaros*
*(212) 367-3521 or jkouvaros@forbes.com*
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**Forbes** EXECUTIVE WOMEN'S FORUM

# Stocks on Stilts

COLUMNIST DANIEL KADLEC WRITES IN THE NOV. 25 issue of *Time*: "The wisest choice when investing is often the toughest. Today that means buying stocks even if you have to mortgage the house—literally. Your financial adviser probably won't tell you so, for fear of being fired on the spot. ... But everyone who has a lot of time until retirement, little debt and a whopping gain in real estate ought to make the most of their home equity by extracting some and wading into equities."

Kadlec is preaching to the choir. Borrowing, to Americans, is what comes naturally. In relation to GDP, personal income and corporate profits, there is more debt than ever before. Vis-à-vis the rest of the world, the hole of indebtedness is $2.3 trillion deep. That was the difference, at year end 2001, between the value of U.S.-owned assets abroad and foreign-owned assets in the U.S. (including stocks, bonds and direct investments). The house of America is already mortgaged.

**The entire U.S. is heavily leveraged. Now the bulls want you to leverage still more, mortgaging the house to buy stocks—even if you have to pay 50 times earnings to get them.**

For people of the "Yes, but" frame of mind, this is the autumn of their discontent. The news is bad, yet the bad news is out, supposedly. The Dow is up and the S&P 500 is up and the four ultracheap tech stocks mentioned in the previous installment of this column *(Nov. 25)* are up. But so, too, are stocks that have no business being up even a little bit—e.g., the certifiably worthless common shares of bankrupt WorldCom, which in recent days jumped by 50% (all the way to 30 cents).

Inconsolable in September, the market had turned euphoric by November. The bulls look forward to a short, victorious war with Iraq, in anticipation of which the oil price will collapse. They expect the continued panic of neophyte short-sellers (who are falling all over themselves to cover bearish bets). They predict that the Republican congressional majority will pass a tax cut, and the Federal Reserve will continue to run three shifts a day at the monetary printing plant.

As for that hole in America's pocket, this happens to be the pocket of the world's hegemonic power. And in that unique capacity, the bulls go on, the U.S. will continue to consume much more of the world's goods than it produces; i.e., the current account deficit may get bigger. But because the U.S. is the

only vibrant major economy, it will continue to attract a growing volume of the world's savings; i.e., the deficit will be financed with ease.

The bulls aren't finished. They say—and who can deny it?—that a rising market sets in motion bullish forces quite independent of the so-called fundamentals. Put yourself in the seat of a mutual fund portfolio manager. There's no shame in losing money during a bear market. Then you aren't alone. But not to make money in a bull market is a firing offense. So rising prices beget rising prices.

These familiar arguments are currently carrying the day. They have, indeed, carried many a day in the past 18 months. The stock-price updraft that started in October is the fourth rally of 15% or more since the market peaked in March 2000.

So we hear over and over: "The bottom is in." What we don't hear is that stocks are cheap. Some stocks are. (Some stocks always are.) But the S&P 500, at 33 times trailing earnings under generally accepted accounting principles, isn't. The market looks less overvalued using forward estimates: It trades at 21 times Wall Street's perfectly objective and unquestionably accurate forecast for 2003. However, it looks more overvalued using trailing S&P "core" earnings (the calculation that treats grants of stock options as an expense and does not treat pension gains as income): Stocks are at 50 times those earnings.

The market has fallen, but from the heavens. At the 2000 peak the ratio of total market cap to GDP was an alltime peak of 183%, according to Bianco Research. At last report, the ratio was just over 100%. Consider, though, it was 81.4% on the eve of the 1929 crash.

The boom of the late 1990s was the gaudiest on record. Booms go boom because the underpricing of capital has consequences. If, as in the 1990s, money on Wall Street is free, people will help themselves. They will build and invest, and overinvest. They will invest in the wrong things (the temporary derangement of the financial markets removes an essential check on bad business decisions). In the subsequent downturn bookkeeping errors are marked to market. Debts are paid down, and speculators rue the day they ever tuned in to CNBC.

What has always happened, in the wake of a bubble, is that at some point the once-inflated prices get truly cheap. Could this time be different? Anything's possible. But I wouldn't mortgage the ranch on it.

Forbes.com | James Grant is the editor of *Grant's Interest Rate Observer*. Visit his home page at www.forbes.com/grant.

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# The Deadbeat Economy

THE RAGING BULL MARKET AND BOOMING ECONOMY of the late 1990s removed the word "risk" from lenders' vocabularies. Since they had already saturated creditworthy borrowers with loans, they ascended to what they thought would be lending heaven. Instead, they descended to subprime hell.

Lenders figured they could profit handsomely off the spread between their (low) cost of funds and the (sizable) interest rates they charged downscale borrowers. Sure, they would have to suffer some bad loans, but not enough to erase that spread. They didn't stop to think that exuberant conditions were temporary and that bad loans would spiral upward. And they didn't see that when myriad lenders pile into the same sandbox, the profit margins thin out. As competition increased for these dubious customers, standards became absurdly loose.

**Subprime lending is a curse that is afflicting a scary array of industries far beyond credit cards. Wireless, autos and housing are also guilty of this foolishness.**

Credit cards are the most obvious weak point. Hell-bent on growth, issuers pumped up solicitations from 1 billion in 1991 to 5 billion last year. With 37% of credit card loans now subprime, defaults have doubled since 1991.

When problems surfaced last year, subprime credit card king Providian's stock collapsed from $59 to $3. This year the stock of another big subprime lender, Household International, was cut in half before the firm sold out to London-based bank HSBC Holdings. My firm subsequently shorted HSBC. Sears, Roebuck & Co. recently confessed to unexpected credit card weaknesses that clipped third-quarter profits by 28%, and Sears expects rising defaults on customer credit cards, which account for 60% of pretax earnings. Its stock dropped an [illegible]nt 32%. Target and Capital One also report big trouble. But the danger extends far beyond credit cards.

Take manufactured housing. In the mid-1990s, lenders dropped down payments from the 10%-to-20% range to 5%, and stretched repayments to 20 to 30 years, from 12 to 15. They also rushed to finance dealer inventories, spawning a big school of thinly capitalized dealers. Manufactured-home shipments leaped. Amid the inevitable crash to earth, top-name lenders retreated from the business, including Citigroup's Associates First Capital, United Cos. Financial and Deutsche Bank. Conseco faces bankruptcy as punishment for buying Green Tree, the leader in mobile-home financing.

Wireless providers, with c[illegible] phone market penetratio[illegible] nearing 50%, have gone aft[illegible] students and other questionab[illegible] prospects. Sprint issued pho[illegible] accounts with abandon, allo[illegible] ing subscribers to its Clear P[illegible] service to make up to $125 [illegible] calls without any payments an[illegible] starting in May 2001, [illegible] deposits. During last year's se[illegible] ond quarter half of all new cu[illegible] tomers enrolled in Clear Pay, which accounts for one-third [illegible] Sprint's 14.6 million subscribers. No surprise: Sprint is endi[illegible] service for accounts 110 days delinquent. And 1,600 Spri[illegible] employees and 500 outside contractors are getting pink slips.

What's next in this parade of subprime disasters? My O[illegible] 14 column said the Achilles' heel of the strong housing marke[illegible] the low-income and other high-risk borrowers that Fannie M[illegible] and other government-sponsored lenders are attracting w[illegible] down payments of 3% or lower. The second recessionary di[illegible] forecast, led by consumer retrenchment, seems to be unfoldi[illegible] Mounting layoffs will eliminate those subprime house buy[illegible] with few other assets. Then the whole housing sector will be [illegible] jeopardy as their exit ripples through the move-up market.

Already homeowners in bankruptcy have swelled fr[illegible] 450,000 five years ago to 750,000, and 1.2% of mortgages are [illegible] foreclosure. Bankruptcy filings under Chapter 13, which [illegible] homeowner-friendly, were up 8% in the second quarter fror[illegible] year earlier. Mortgage delinquencies are jumping, especially [illegible] the FHA category dominated by subprime loans. Are you aw[illegible] that H&R Block, in addition to its other woes, is a big mortg[illegible] lender whose portfolio is loaded with subprime loans that do [illegible] meet Fannie's standards?

Don't think Fannie is risk-free. Its required core capita[illegible] only 2.4% of on-balance-sheet assets. Delinquencies are wo[illegible] than they seem. With its new PaymentPower program, borro[illegible] ers can skip two payments every 12 months. But they'll show [illegible] on the bad-loan list someday.

We'll soon learn how Detroit is part of the problem, [illegible] Automakers' desperate attempt to keep auto plants humm[illegible] will lead to subprime lending rot. Lots of marginal buyers [illegible] simply mail back their car keys when the zero-zero-zero g[illegible] periods expire. Even BMW is extending low interest rate loan[illegible] flawed borrowers to keep used cars from clogging dealer lot[illegible]

Avoid stocks of subprime lenders. When nonpayme[illegible] become a deluge, the subs will be underwater.

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A. Gary Shilling is president of A. Gary Shilling & Co., economic consultan[illegible] and investment advisers. Visit his home page at www.forbes.com/shilling.

# orbes Investors Advisory Institute Finds tocks That Rise Even In A Down Market

**Profitable Picks For 12 Months During Bear Market!**

**Vhen Everyone Else Was Dumping AMZN, TTI, and AMSY, Institute Analysts Forecast These Stocks Would Turn Around. They Did.**

## ur subscribers earned profits during the 12 months hen the S&P500 averaged a 10.4% loss.

*Wallace Forbes, President, Forbes Investors Advisory Institute*

Our analysts at the Forbes Investors Advisory tute see more profitable opportunities ahead s year. You could be one of the few investors to their recommendations. Our Institute has etly picked a huge number of winning stocks he last 48 years. During a severe bear market, last 12 picks, from July 2001 to June 2002, e been profitable on average.

Amazon.com shot up 64% in just 3 1/2 nths. That's triple the gain for the S&P500 in same period, September 21, 2001 through uary 4, 2002. Tetra Technologies, Inc. climbed within 3 months after the Institute spotlighted r our clients. The S&P 500 fell 3% during the e period.

The Institute's selections include blue chips, ll caps, value stocks, growth stocks, manufacers, retailers, energy stocks, and (sometimes) h stocks.

Even in the middle of the tech wreck, the titute's December 2000 tech stock selection ned 19% in 5 months. You would have lost ney if you had invested in the S&P 500 instead.

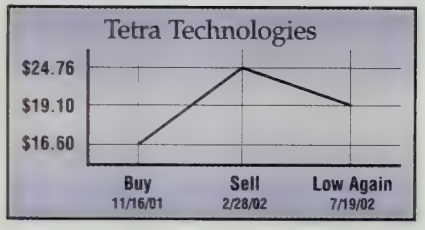
On September 21, 2001, when Amazon.com's ck price plummeted way down near a 52-week , we looked beyond the dot-com collapse and terrorist attacks. Amazon's sales were headed ight up – even as the stock price plunged.

When we ran the numbers and did our due igence, we found that a lot of AMZN's npetitors had gone out of business. Net losses e finally decreasing and the company had a od shot at finally turning a profit. International es had just jumped by 75%. And AMZN was king strategic alliances with retailers like rget and Circuit City that would start paying big time.

We set our target price at $12 per share within years. But our analysis proved too conserva. The stock hit our target price in just 3 months!

By January 4, 2002 with Amazon.com trading ove our target price, we felt that the stock had ced in most — if not all — of its upside poten. We advised the Institute's subscribers to take ir 64% profits. Not bad for a 3 1/2 month estment!

When we recommended Tetra Technologies, a le-known firm that provides supplies and rvices to oil well drillers, we determined that it s undervalued by 30%. Third quarter revenues




were up 43%. The gross profit margin was also climbing. TTI had reduced debt by 56%. We advised buying it at $16.60 on November 16, 2001.

By February 28, 2002, with TTI a hair above our target price, we told our subscribers to sell because we were concerned that falling energy prices could push the stock price back down. And that's exactly what happened. The stock started a downward drift shortly after our sell recommendation.

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Every month, the analysts at *Forbes Investors Advisory Institute* use our proprietary stock selection system to pinpoint undervalued stocks that have the potential to appreciate enough to make you grin from ear to ear.

Our screening process goes way beyond the information in the *Forbes* magazine database. The Institute's System, which is updated regularly, evaluates 3,000 stocks — and picks out a handful of issues that we determine are temporarily undervalued.

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# Retail Redemption

**MARTIN HANAKA burnishes troubled Sports Authority and, with it, his ow tarnished reputation. It's a surprise comeback for both.**

BY BRENDAN COFFE

MARTIN HANAKA AND SPORTS Authority were both damaged goods when the retailing executive landed the top slot at the sporting goods chain in September 1998.

Hanaka's career had been derailed the year before, when he was arrested for allegedly assaulting a 23-year-old female underling with whom he was involved. Soon after, he resigned from Staples, where he was president and chief operating officer. Hanaka's reputation seemed forever sullied, even though the charges were later tossed out by a judge. Disgraced executive and desperate company were matched up by Massachusetts Governor-elect Mitt Romney, who served on the boards of both Staples and Sports Authority and reasoned that Hanaka "deserved a second chance."

The sporting goods retailer seemed an unlikely launching pad for a comeback. The Fort Lauderdale-based company, which sells just about any hobby-related item, from Rollerblades to rifles, was perilously close to bankruptcy. Rapid-fire growth had boosted the number of stores to 228 in 1998 from just 8 in 1990, but the expansion was neither well planned, nor well funded. Many stores were opened without a senior executive looking at new locations or studying the markets. The company's debt ballooned to $275 million as it borrowed money to pay for new store development. Although the new stores helped push sales to $1.6 billion in 1998, the company posted a $64 million loss. That same year a proposed purchase by a potential savior, Foot Locker parent Venator Group, fell through. "We had a broken company," says Hanaka, 53.

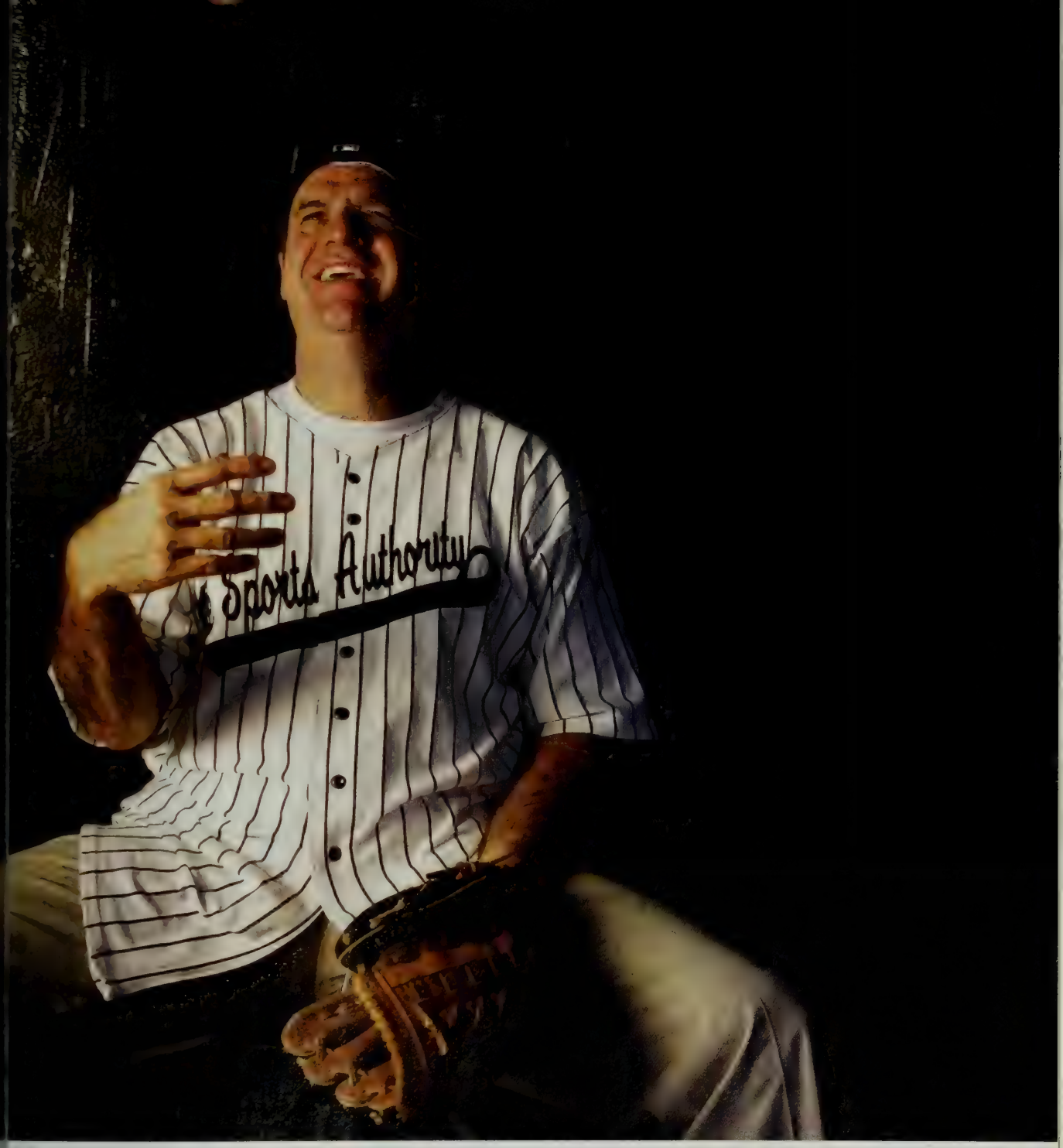
Fixing its stores was one of his top priorities. Hanaka ordered a comprehensive six-month survey of Sports Authority stores and its shoppers. In-house researchers created a database of some 9 million Sports Authority customers, studied credit card purchases and information and used blind online surveys. The results were startling: Sports Authority didn't have a clue about who was buying its products. For years management assumed that most of its customers were men—stores and ads were designed to appeal to them—but Hanaka found that women shoppers actually drive most of its business. Specifically, women aged 25 to 45 contribute 70 cents of every dollar spent at Sports Authority, whether the purchase is footwear, fishing equipment or Little League gear. "Mom is pivotal," Hanaka says.

Now much-belated changes are under way to make Sports Authority more appealing to her. Cluttered, warehouse-like stores with dark walls are being redesigned. In new stores shelves sit closer to the ground; aisles are wider; lighting is brighter; walls and ceilings are white; and sales associates assist shoppers with footwear selection. Women's apparel and equipment is being boosted to 40% of store offerings, up 33%.

The merchandise mix, meanwhile, is being tailored to local interests in store markets. Previously, nearly all of the 45,000 items sold in Sports Authority stores were the same in each store—a sloppy, one-size-fits-all retail strategy. As part of Hanaka's study of stores and consumers, he learn that one store in Illinois offered 100 diffe ent firearms in an area where only 18 pe ple held gun permits. Now, factors such the number of gun licenses, swimmi pools and Little League diamonds in town determine a store's product mix. F instance, Hanaka tripled the shelf spa dedicated to lacrosse equipment in Spo Authority's five stores on Long Island. B in Arizona, where lacrosse isn't popular, t equipment isn't offered. Company sales lacrosse-related goods rose 40% after t mix was rejiggered in 2001.

Although Hanaka wants to boost sal of private-label gear, which is 33% mo profitable than name-brand goods, fro 9% to 15% of revenue, the new stores ha helped Sports Authority land som higher-priced, big-name sports appa and equipment makers that once shunn the chain. Among them: Salomon, Di mondback and K-Swiss. "Manageme has reinvigorated the retail sales staff an you feel it when you walk into the store says K-Swiss Chief Executive Stev Nichols, who had yanked his produc from Sports Authority in 1999.

There's also a new emphasis on ma keting. An aggressive direct mail campaig targets women, promoting yoga gear a sneakers. In new stores there's an in-sto TV "network," called WTSA, that feature blend of sports news, celebrity features a ads for products in the stores in two-ho programming loops. Hanaka has also ma aged to ink deals with manufacturers li Nike for the Nike Driver, the golf club Tig Woods used in the Masters Tournamen




ch it promotes on the network. The gramming and the ads hit consumers n they are shopping for such items. y have also enabled Sports Authority ash its advertising and marketing bud- 20%, says Hanaka.

Results? The average sale in revamped es, $48, is 10% higher than in Sports hority's old-format outlets. And overall e sales increase 5% a year once stores remodeled, says Hanaka. That increase, ch amounts to about $450,000 a year on average annual store sales of $9 million, covers the cost of each store redesign.

The 204-chain company is on track to post sales of $1.5 billion for the fiscal year that ends Feb. 2. That's a 6% increase over 2001 and the first uptick in four years. Net income is expected to jump 46% to $22 million in the chain's third straight year of profitability, thanks in part to the closing of two dozen money-losing stores. Debt, meanwhile, has been reduced to $156 million. "Marty's done a fantastic job," says Sports Authority founder Jack A. Smith, one of the company's largest shareholders.

There are still hurdles. Store renovations won't be completed for three more years. And the stock, which closed recently at $7, trades at just 10 times earnings after hitting $14.85 in April. But Hanaka is optimistic. "The turnaround," he says triumphantly, "is done."

And he's not just talking about the sporting goods chain. F

# Dr. Feelgood

New pain relievers are moving through research labs. NICOLAS BAZAN hopes his drug may ease future aches. BY ALIYA STERNSTEIN

SIR JOHN VANE KNOWS A LOT ABOUT PAIN. THE BRITISH pharmacologist won the Nobel Prize in Medicine in 1982 for discovering the link between aspirin and pain signals in the brain. Now he says scientists can do a better job at pinpointing and relieving pain.

The prognosis: Researchers are busily developing a new generation of drugs for everything from minor pangs to postsurgical trauma, without the side effects that have dogged some of the more recent entrants in the pain relief market. If all goes well, the first of these new drugs should be available by prescription by 2005 and over the counter within ten years.

The $14-billion-a-year prescription pain drug industry has seen some torrid growth lately, thanks to the new class of called COX-2 inhibitors targeted at arthritis and pain. Sales of Pharmacia's Celebrex should pass $2.9 billion this year, up from $2.2 billion in 2000. Merck's rival drug, Vioxx, should generate $2.1 billion this year, up from $1.5 billion in 2000. Meanwhile sales have flattened for name brand over-the-counter drugs such as Tylenol, Aleve and Nuprin, which accounted for $2.5 billion of the $3 billion segment, according to Mark Goldstone, who tracks industry data for marketing conglomerate Euro RSCG.

But a recent string of woes have put a hurt on the pain relief business. In June Express Scripts, one of the biggest managers of pharmacy benefits in the U.S., told its clients that Celebrex

ioxx provide only a narrow benefit over uprofen (the branded version is Advil) and proxen (Aleve), which, as generics, are vastly heaper *(see box)*. Complaints have dogged elebrex and Vioxx since their introduction in 999. Accusations include increased risk of gasointestinal bleeding and heart attacks, as well slowdowns in the ulcer-healing process.

While aspirin, acetaminophen (Tylenol) and ost over-the-counter pain relievers are consided very safe and effective, some troubles have cently emerged for them, too. In September a ood & Drug Administration advisory commite met to review data on the 458 acetainophen-overdose-related deaths every year in e U.S., of which 100 are unintentional. As a sult, the FDA is considering changing acetainophen warning labels to identify the risk of er toxicity. Another possible label change ould warn that excessive doses of ibuprofen nd naproxen may increase your risk of gasointestinal bleeding and magnify kidney damge for those with pre-existing conditions.

The physiology of pain relief is still only artly understood, even though aspirin has een around since 1899 and Johnson & Johnon's McNeil Laboratories started selling lenol in 1955. John Vane won his Nobel by iscovering in 1971 that aspirin and similar rugs inhibit an enzyme which makes rostaglandins, compounds released in sponse to inflammation. This prostaglandinroducing enzyme is called cyclo-oxygenase, or OX. Vane's research led drug companies to tart pain by stopping the COX enzyme from producing rostaglandins.

As it turned out, aspirin and its cousins ibuprofen and proxen were quite effective in shutting down both COX-1, which active in the stomach and in blood-clotting platelets, and COX-2, hich exists primarily at the site of inflammation and in the brain. he idea behind COX-2 inhibitors, such as Celebrex and Vioxx, as to spare the stomach lining by targeting only COX-2.

Left out in this research was acetaminophen, a brain drug that orks on neither COX-1 nor COX-2. Scientists had no hard evience on how it works, but the recent discovery of the COX-3 nzyme by Brigham Young University scientist Daniel Simmons ould possibly hasten the arrival of the next Tylenol.

At the forefront of this work is fledgling firm St. Charles harmaceuticals in New Orleans. Its founder, Nicolas Bazan, a 0-year-old neuroscientist, has a seemingly simple and elegant nswer to the pain problem: Chemically combine a derivative of cetaminophen with a saccharinelike component. Adding a veet substance solves the problem of liver and kidney toxicity, llowing him to deliver safely a far more potent dose of relief hat he suspects may target the COX-3 enzyme.

## Ills and Pills

**EXTRA-STRENGTH ACETAMINOPHEN**

Tylenol: 12¢ per pill
Generic: 7¢ per pill
PROS: Widely tolerated; reduces fever
CONS: Ineffective for severe pain; may cause liver damage

**IBUPROFEN**

Advil: 12¢ per pill
Generic: 8¢ per pill
PROS: Same as acetaminophen; reduces risk of heart attack
CONS: Ineffective for severe pain; stomach bleeding

**NAPROXEN**

Aleve: 13¢ per pill
Generic: 9¢ per pill
PROS: Same as ibuprofen
CONS: Same as ibuprofen

**COX 2 INHIBITORS**

Celebrex/Vioxx: $4.50 per pill
PROS: Relieves arthritis pain and cramps; reduces likelihood of ulcers
CONS: Available by prescription only; slows blood clotting; may cause stomach bleeding; increases risk of heart attack

St. Charles, named after the trolley-tracked avenue near Bazan's home, is in very early stage clinical trials with its new drug, SCP-1. "There's nothing out there that is as effective, that is non-narcotic ... and is at least as powerful as acetaminophen," Bazan claims, adding that unlike acetaminophen, his drug will not lower fever.

Ten years ago the Argentinean-born Bazan joined up with Julio Alvarez-Builla, an organic chemist at the University of Alcala in Spain, to develop better painkillers that had fewer side effects. It turns out that, in excess quantities, acetaminophen's breakdown products latch on to the FAS ligand of liver cells. That protein is a switch that tells a cell to self-destruct. The addition of a saccharinelike component prevents this FAS-triggering. In mice, 27 milligrams of acetaminophen killed half of the subjects, whereas twice as much SCP-1 was harmless.

Now humans are the guinea pigs; 40 are consuming up to 900mg of SCP-1 a day. If SCP-1 gets through the FDA's hoops, the new morning-after-Mardi-Gras pain relief could be available by prescription in 2005 and without perhaps by 2007.

Bazan wants to line up a big drug firm to peddle the potion. It won't be J&J's McNeil Consumer & Specialty Pharmaceuticals division, which had not heard of his company when a FORBES reporter called. J&J is not saying much about its research into acetaminophen improvements, except that it wants to ascertain whether or not COX-3 exists.

Other firms have new pain relief drugs in the pipeline. AstraZeneca has doped its version of a COX-2 inhibitor with nitrous oxide—yes, laughing gas—to soften the gastrointestinal blow. Nitrous oxide increases blood flow to the stomach, thickening the mucous lining that COX-2s tend to wear thin. In early-stage human trials in May 2000, scientists observed 66% fewer stomach erosions in 31 patients treated with a nitrous oxide version of a COX-2 inhibitor, versus naproxen. This drug could conceivably be ready by 2006.

Novartis also has a new anti-inflammatory, Prexige, for acute and chronic pain. Due out in 2004, it could work faster, longer and cause fewer ulcers than other COX-2s.

And Pharmacia's new injectable COX-2, called Dynastat, could supplement (or supersede) morphine. Approved in Europe, Dynastat eases suffering for postsurgical and office patients in minutes, instead of the up to an hour it takes COX-2 pills to kick in. The drug, still undergoing clinical trials in the U.S., seems to have the same side effects as the other COX-2s, but in tests against morphine, ketorolac (Toradol) and placebo, Dynastat was superior to morphine and placebo, and comparable to ketorolac in potency and duration. F

# The Right to Bear a Fabulous Outfit

**A sale of early American militia accoutrement highlights an obscure chapter in U.S. history—and shows those guys had a real sense of style.**

BY SUSAN ADAMS

AMONG THE WEALTHIER volunteer militia in early 19th-century America, competition was fierce. Sartorial competition, that is.

For the Dragoon Corps in Worcester County, Mass. that meant a snazzy three-piece ensemble of bright red wool felt, studded with brass bullet buttons and accented with navy blue cuffs and heart-shaped appliqués on the jacket tails. The helmet: a wild, painted red leather affair with black and grey-blue stripes, topped with a horsehair-entwined crest.

The New York State Militia, First Division, by contrast, opted for a stately navy blue coatee with matching trousers. It was Major General Nathaniel Coles' hat that made the boldest statement: a beaverskin *chapeau de bras*, with a black silk grosgrain ribbon cockade, gilt-metal eagle pin and 20-inch ostrich feather plume.

These were uniforms? Absolutely, though a far cry from the jack-booted, camouflage-toting set that calls itself militiamen today. Starting in the 17th century, the American Colonie adopted a local militia system to which every able-bodied ma between the ages of 18 and 45 was required to belong. Then were two types. The enrolled militia was for the average Josiah whose local government issued him a plain uniform, musket and sword. Then there was the volunteer militia, made up o moneyed folk. They supplied their own equipment, includin artillery. For the elite, this was a chance to express patriotism an to show other units that they had a superior sense of style.

Elaborate and often quite beautiful, volunteer militia regali is in a unique collecting category. The objects embody a signifi cant slice of American history and also showcase the craftsman ship of unsung local artisans. Many of the pieces—beautifull painted canteens, knapsacks, drums—marry graphic design an functionality. The uniforms are at once elegant and ostentatiou many of them decorated with flashy gold appliqués, embosse brass buttons and gilded, ornately embroidered epaulets.

No one has amassed a larger collection of militia accou trement than William H. Guthman, an author and American dealer based in Westport, Conn. At 78, Guthman's advancin age and desire to have a hand in selling his treasures led him t decide to offer up his entire militia collection at Sotheby's i New York City on Jan. 19. Never has there been an auction o

Michael Jackson? No, Massachusetts militia dragoon uniform, circa 1815-20. Bottom right: New York officer's coatee and a wood canteen, War of 1812. Left: painted dragoon helmet, from New Milford, Conn.

# Balls, cotillions and parades were opportunities to STRUT ONE'S EPAULETS.

this sort on this scale.

"I wanted to write the catalog," insists Guthman, who is also one of the appraisers on PBS' *Antiques Roadshow*. He spent four weeks at Sotheby's laboring over the 220-page tome that describes all 330 lots in detail. Guthman wrote the descriptions himself.

Dragoon helmet from New Milford, Conn. circa 1825: "ornately decorated and painted ... with a huge pierced-metal crest, each side of the black leather body further embellished with a red and gold sunburst beneath an arching band of gold, above which are five stars ... the embossed, gilded leather cockade decorated with a spread-wing eagle standing on a globe." Or the officer's epaulets, circa 1820: "embroidered with gilt-metal thread in scrolling foliate designs, six-pointed silver metallic stars and gilt-brass buttons."

Lest you think the men sporting this finery didn't fight, Guthman will set you straight. Some of the most important conflicts in America were waged by militia men. The Battle of New Orleans in the War of 1812 against the British, for instance, was fought mainly by the Tennessee Riflemen, a militia corps led by Andrew Jackson. Most people don't know that Abraham Lincoln was a captain of the Illinois militia during the Blackhawk War of 1832.

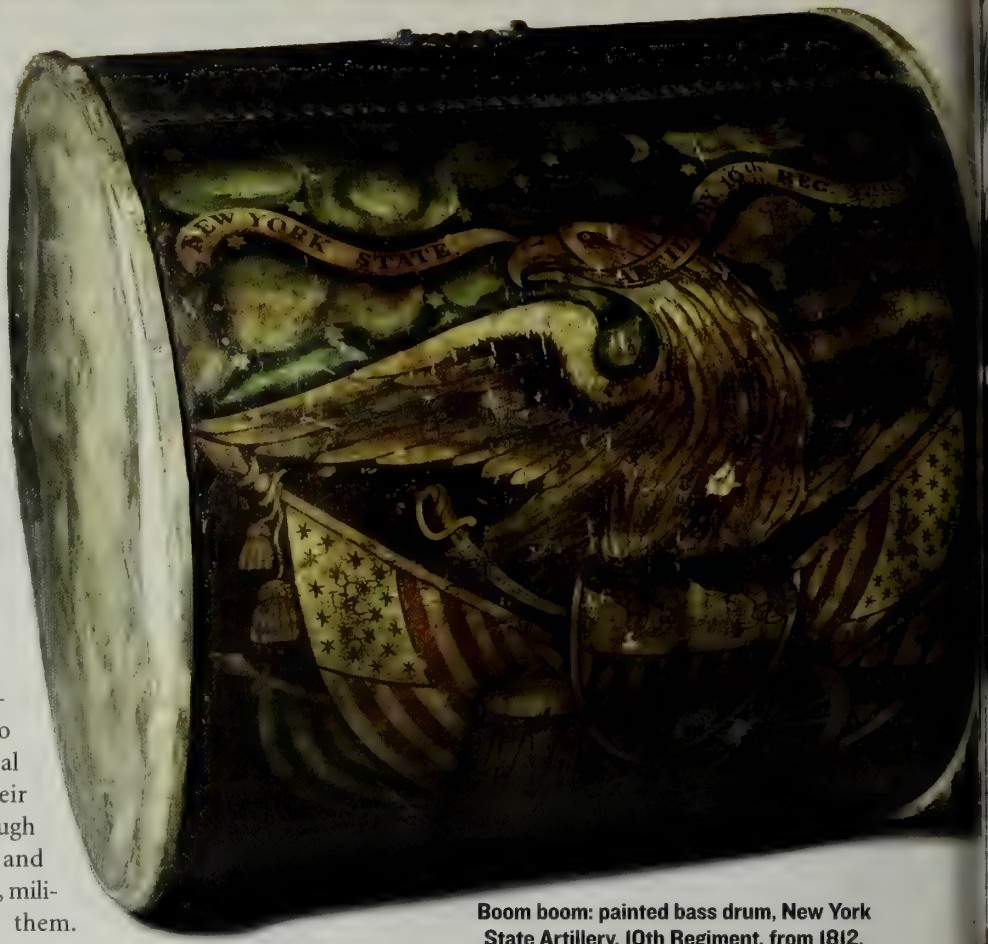
Likewise, the 18th-century French and Indian Wars were fought by militia troops from all the Colonies. The Minutemen, colonial troops ready to take the field on short notice in the American revolution, were in fact militiamen from New England. So was Paul Revere, who was second in command of an artillery regiment of the Massachusetts militia.

Though beautiful, the most elaborate militia gear were horribly—sometimes fatally—impractical when it came to doing battle with the native population. Bright red clothing and headgear topped with foot-high feathers? All the better for the Indians to target from the safety of their animal skins that blended into the woods. While troops in the westernmost states figured out that they needed to tone down their garb and alter their battle tactics, the New Englanders were slow to come around. The militias were a carryover from the British, notorious, of course, for doing battle in the most ornate, ridiculously

impractical outfits.

Why did America leave the important job of protecting the country up to local militias? "The Founding Fathers were afraid of a standing army," explains Guthman. "They didn't want the central government to have a fighting force." Until the Civil War, when the country's needs abruptly changed and the federal government assumed control of the armed forces. Militia troops were absorbed into the army.

The men of the militia may have been fighters, but they also knew how to party. Balls, cotillions, suppers and collations were all great opportunities to strut one's epaulets. So were parades. Every July 4, local militias got decked out in their finest outfits and paraded through the streets marching to fifes and drums. When dignitaries visited, militias were there to honor them. Throughout the Marquis de Lafayette's 14-month tour of America, starting in 1824, local militias greeted and escorted him, ostrich plumes waving. Statesmen's funerals were opportunities for militia mourning parades, accompanied by slow, muffled drumbeats.




**Boom boom: painted bass drum, New York State Artillery, 10th Regiment, from 1812.**

## "The founders were AFRAID of a standing army."

**Epaulets make the man: These belonged to a militia officer in the early 19th century.**

While Guthman says he never collected his militia gear as an investment—"I love this stuff," he says, simply—values have risen over the years. For instance, a set consisting of jacket, officer's chapeau, hat box and woven linen handkerchief that once belonged to New York's General Coles has a low estimate at Sotheby's of $30,000. Guthman bought the set from a dealer in 1960 for $3,500. Many of the hats Guthman is selling came from a group of 100 he bought in 1962 for a total of $25,000. Each piece is now estimated to sell for between $3,500 and $4,500. The total take Sotheby's hopes to bring from the Guthman sale: $1.5 million.

For those interested in this field but averse to private collecting, the best place to see militia regalia is Old Sturbridge Village (www.osv.org) in Sturbridge, Mass. There's a room with a dozen cases dedicated to early-19th-century New England militia uniforms, firearms and accoutrement. Once a year the museum stages a Militia Day, with musket firings, fife-and-drum marches and a mock battle. Next year Militia Day is May 24. F

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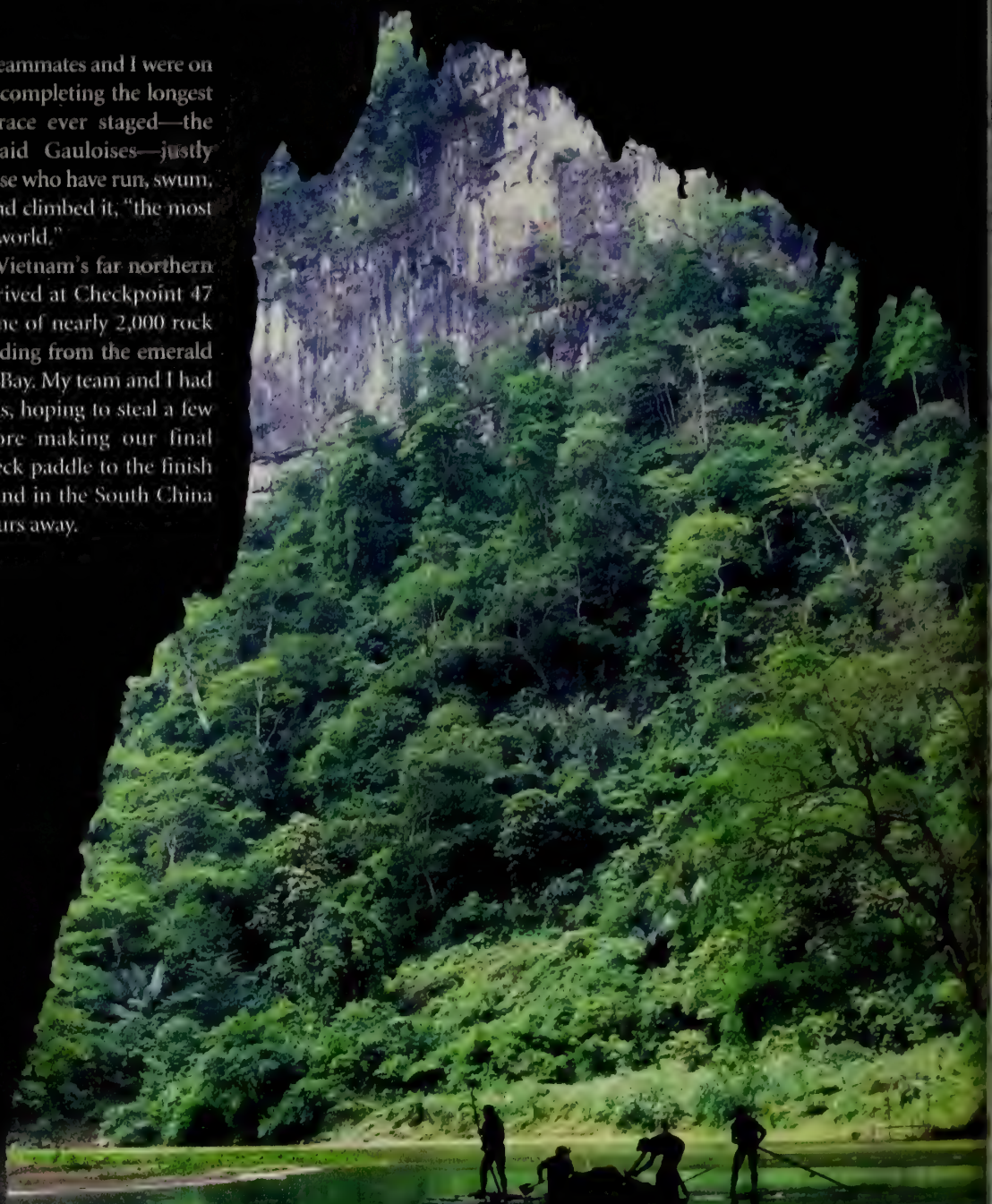
I paused. My teammates and I were on the verge of completing the longest expedition race ever staged—the 620-mile Raid Gauloises—justly called, by those who have run, swum, pedaled, crawled and climbed it, "the most sadistic race in the world."

Starting from Vietnam's far northern border, we had arrived at Checkpoint 47 on Titop Island, one of nearly 2,000 rock formations protruding from the emerald waters of Ha Long Bay. My team and I had beached our kayaks, hoping to steal a few hours' sleep before making our final assault—a breakneck paddle to the finish line on Cat Ba island in the South China Sea, some eight hours away.



**The Nang River runs through it: Phuong Cave runs for about a fifth of a mile, and is a favorite passage for travelers on bamboo rafts.**

# Panoramas And Sore Muscles

**The world's most grueling endurance race rewards its victims with lovely locales.**

BY BRAD PENNINGTON

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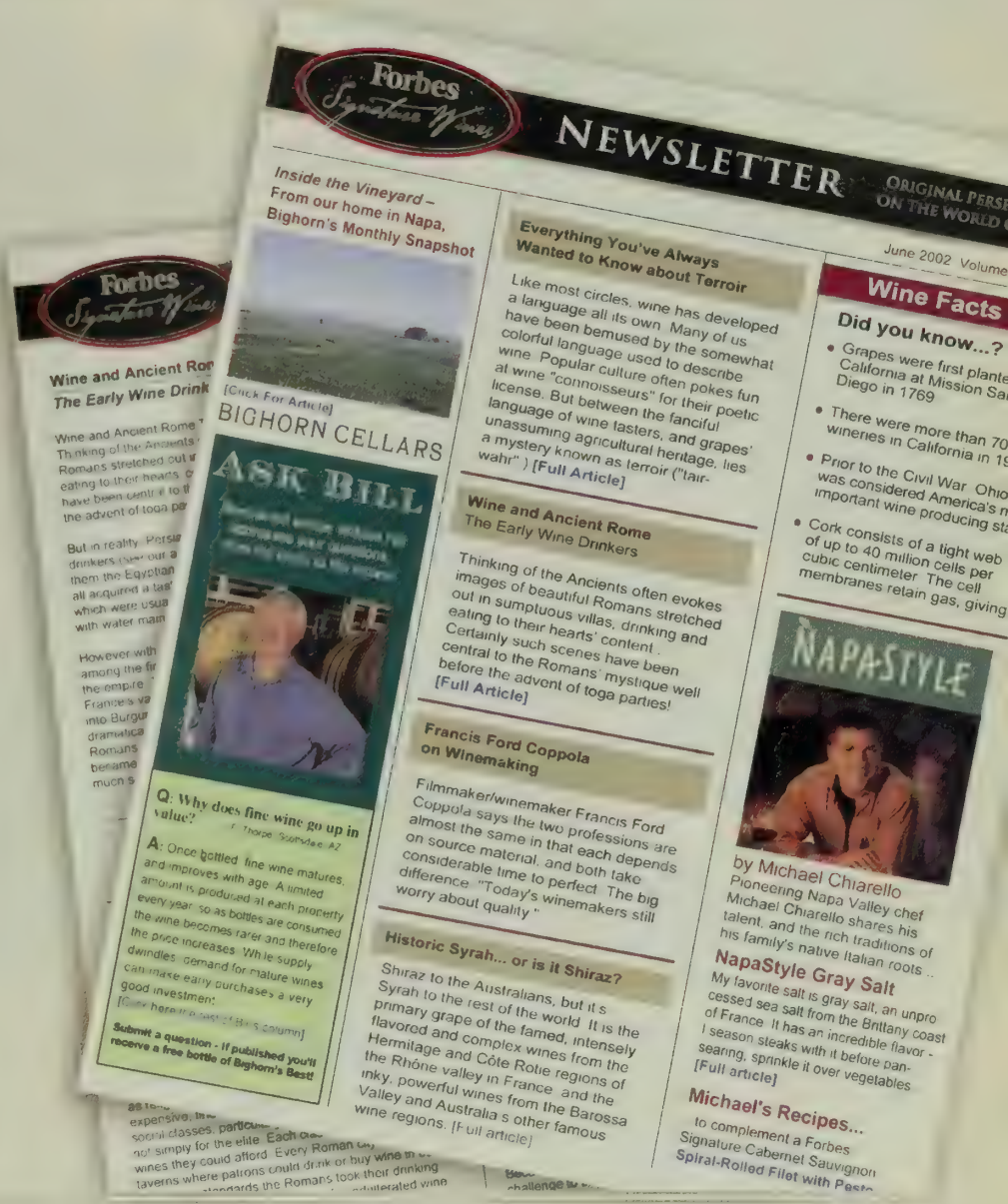


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Outta my way: an 80-mile stretch of kayaking along Ha Long Bay.

The Raid Gauloises (no affiliation with the French cigarette company) combines several extreme sports into one. It began in 1989, when a French journalist and adventurer staged a nonstop ten-day, 250-mile multisport race across New Zealand's South Island. In the 13 years since, expedition racing has become a fad, with the number of races in the U.S. climbing from 50 to 300 or so in the past 5 years. The best known in North America is the Eco-Challenge.

The original Raid has continued to evolve in length and difficulty, changing venues every year—places as far-flung as Oman, Ecuador and Tibet. For 2003 the setting will be Kyrgyzstan; the distance, 750 miles. Each running draws a mix of professional athletes and gung-ho amateurs from some 20 countries, divided into coed teams of seven members each (five competitors, two support crew). Required skills include mountain biking, r ning, canoeing, orienteering and rappelling, but additional ciplines are added to suit the locale—camel-riding, for exam in Oman.

## Required skills include CAMEL-RIDING, plus orienteering and rappelling.

In Vietnam our team included Dorsey Moore, a Conser tion Corps administrator; Nancy Bristow, a computer progra mer; and Brett Lehigh, an air traffic controller (all from Cali nia). And me—a Texas tax lawyer—as team captain. Like

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other 50 teams, we were given 12 days to complete 1,000 kilometers of largely unmapped trails. The course was divided into a series of checkpoints. Failure to reach any one in the specified time meant disqualification, though the route was left to our own discretion (and navigational ability). All five team members had to complete each section together.

The course, kept secret until two days before the start, began in the village of Bac Ha, 19 miles south of the Chinese border.

## Surviving the TOUGHEST RACE ON EARTH, we were too tired to exult.

We ran and trekked 75 miles across rice-terraced mountains and primeval forests. A 59-mile mountain bike ride and a 42-mile canoe trip down the Gam River in Ha Giang province followed. We crossed highland valleys and eventually the rice plantations of the delta, heading for the Gulf of Tonkin. Days of 100-degree heat gave way to nights of torrential rain.

We completed the first stage of the race in 61 hours, including 5 for sleep. Our reward: a rendezvous with our support crew at Checkpoint 14 in Thac Mo nature reserve. Mike Hefner (a dive shop manager) and Bill Spenny (a NASA space shuttle engineer) replenished our backpacks, tended to our medical needs and suffered our sour dispositions. We had already exceeded the distance of the Hawaii Ironman Triathlon by 40 miles; with nearly 440 miles still to go.

Burning quads and blistered feet were recompensed by spectacular panoramas along the way: colorfully dressed Hmong and Dao mountain people walking to market, the stilt-house villages of the lowland Tay and children directing water buffalo. But much of the scenic grandeur got lost in a fog of sleep deprivation and fatigue.

Take your pick: You can win or you can enjoy the experience. We felt that conflict most poignantly in Ba Be National Park in Bac Can province, where we crossed a series of waterfalls using fixed ropes, scaled the peaks of a rain forest and paddled a bamboo raft through a cave on the Nang River, en route to Vietnam's only mountain lake. We would have liked to have been able to absorb this magnificent place—one we probably would never see again. But Ba Be went by in a blur.

By the time we paddled across Ha Long Bay, a French team had claimed first place. But we were one of 34 teams to finish, placing 29th. Traveling 250 miles on foot, 200 miles on mountain bikes and 150 miles by canoe, raft and sea kayak, we had survived the toughest race on earth. Too tired for exultation, we quietly exchanged handshakes and retired to plan—careers permitting—our next Raid. For information on future Raids (and video of past ones), visit forbes.com/raid.

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| Jan 27-Feb 2 | Bob Hope Chrysler Classic, La Quinta, CA | USA/CBS |
| Feb 3-9 | AT&T Pebble Beach National Pro-Am, Pebble Beach, CA | USA/CBS |
| Feb 10-16 | Buick Invitational, La Jolla, CA | USA/CBS |
| Feb 17-23 | Nissan Open, Pacific Palisades, CA | USA/ABC |
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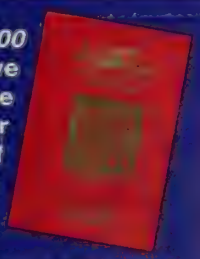

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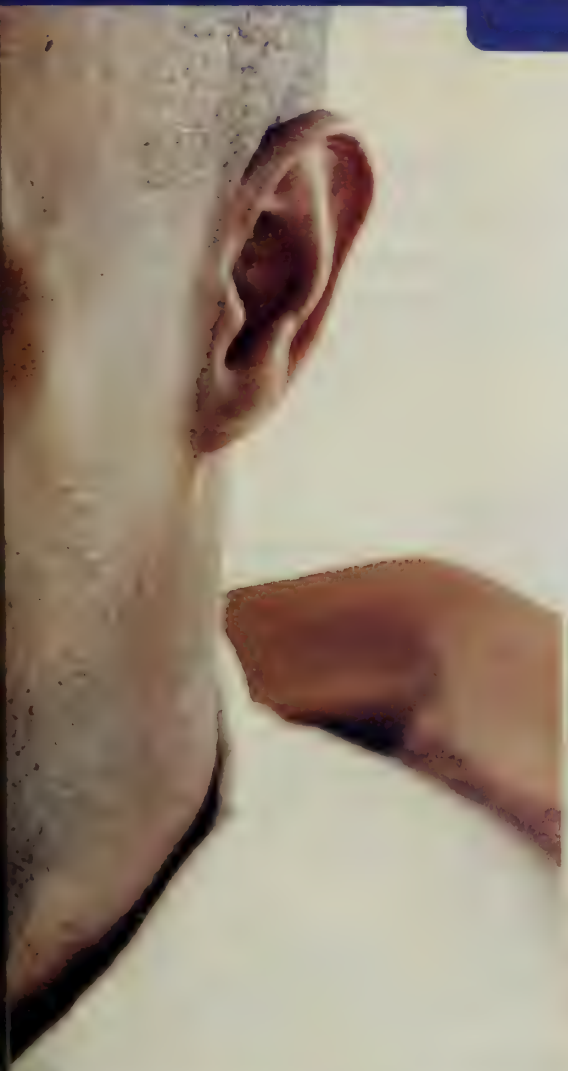

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# THOUGHTS

## On the Business of Life

***Business was originated to produce happiness, not to pile up millions. Are we in danger of forgetting this? What profiteth it a man to gain uncounted riches if he thereby sacrifices his better self, his nobler qualities of manhood? Mere getting is not living. The man who depends upon his bank account to insure him a happy life reaps disappointment. To the businessman, success heretofore too often has been merely to become rich. That is not a high standard. It is a standard, happily, that is passing.***

—B.C. FORBES (SEPT. 15, 1917)

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—JOHN D. ROCKEFELLER (1917)

*The year 1929 should be one of unprecedented prosperity. Good times should be experienced not only by the great majority of our own people but by those of almost every other country in the world which is at peace.*

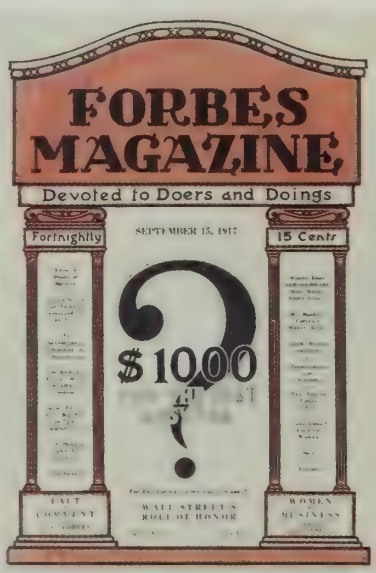
—WALTER P. CHRYSLER (1929)

*It is not hard to make labor happy if you recognize yourself in your men. Such a thing as democracy in industry, love in industry, is possible—and it is good business. It's got to be made possible. It is as simple as the Golden Rule.*

—GEORGE F. JOHNSON (1939)

*Boredom is the worst mental strain; before long you begin to have hallucinations.*

—STANLEY KUNITZ (1949)




*A man will give up almost anything today before he gives up running his automobile.*

—HARVEY S. FIRESTONE JR. (1958)

*People are motivated by emotional drives of various sorts. When you tamper with those emotions, you're tampering with what makes a company successful.*

—HENRY SINGLETON (1968)

*Never spend your last reserves—because no man can predict how far the market will go to emotional extremes or what disaster will befall the human race. When you're 80 you'll understand.*

—T. ROWE PRICE (1977)

*We are living in the most glorious period of world history. We are looking ahead toward an extraordinary period of long-range prosperity.*

—JOHN TEMPLETON (1988

*Leadership is a performance. You have to be conscious about your behavior, because everyone else is.*

—CARLY FIORINA (199

*There are no foreseeable limits on how much we can grow.*

—DENNIS KOZLOWSKI (200

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